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JEB FORT STORY, VA  
5090.3a

FINAL REPORT VOLUME 3 OF 3 FIREFIGHTER TRAINING AREA AND LIGHTER  
AMPHIBIOUS RESUPPLY CARGO (LARC) 60 MAINTENANCE AREA FORT STORY VA  
11/1/1994  
INTERNATIONAL TECHNOLOGICAL CORPORATION

0340

0140



**INTERNATIONAL  
TECHNOLOGY  
CORPORATION**

Project No. 519029  
November 1994

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## **Final Report - Volume III of III**

# **Fire Training Area No. 4 and LARC Area Fort Story, Virginia**

Contract No. DACW45-90-D-9002  
Delivery Order No. 55

Prepared for:  
U.S. Army Corps of Engineers  
Rapid Response Group  
Omaha, Nebraska



Prepared by:  
IT Corporation  
Monroeville, Pennsylvania

**RESPONSIVE TO THE NEEDS OF ENVIRONMENTAL MANAGEMENT**

## **APPENDICES**

**APPENDIX G**

**SHALLOW AQUIFER ANALYSIS REPORT**





**SHALLOW AQUIFER**

**ANALYSIS**

**FOR**

**BIOREMEDIATION AREA**

**LARC MAINTENANCE SITE**

**FORT STORY**

**VIRGINIA BEACH**

**VIRGINIA**

**May 12, 1993**

Prepared for  
Solutions Environmental Associates, Inc..  
814-B Greenbrier Circle  
Chesapeake, VA 23320

***GES***

Geotechnical & Environmental Services, Inc.  
P.O. Box 354  
Mt. Sidney, VA 24467  
(703) 248-0610

Project Number E-9317



May 12, 1993

Ms. Dorothy Small  
Solutions Environmental Associates, Inc.  
814-B Greenbrier Circle  
Chesapeake, Virginia 23320

Reference: Fort Story Bioremediation Project

Dear Ms. Small:

We have completed our analysis of the shallow unconfined aquifer under the referenced site to determine the optimum recovery well system to provide hydraulic isolation during bioremediation operations. To obtain the necessary field data, a total of six (6) wells were installed within the boundary of the site. The location of the wells are shown on the attached Plate 1. Four (4) of the wells labeled MW-1 through MW-4 were installed near the site corners as two (2) inch diameter monitoring wells completed to a depth of approximately fifteen (15) feet. Monitoring well No. 5, installed to a depth of twenty-five (25) feet on the west end of the site, is the four (4) inch diameter pump test well. Approximately thirty (30) feet northwest of MW-5 is MW-6 which is a two (2) inch diameter observation well installed to a depth of fifteen (15) feet. Logs for each of these wells with the exception of MW-6 are attached.

Water levels in the wells twenty-four (24) hours after installation ranged from three (3.0) to six point three five (6.35) feet below ground surface. The elevation of the static water levels across the site indicate the groundwater movement is toward the north as expected. Based on the measured static water level elevations, an average hydraulic gradient of .002 ft/ft was determined between monitoring wells.

Monitoring wells MW-1 through MW-4 were pumped after development for approximately thirty (30) to sixty (60) minutes at a rate of six (6) gpm until a static pumping level (drawdown) was established on each well. The pump was then turned off and the recovery rate measured. Based on this data, an estimate of the hydraulic conductivity was calculated for each well. The rates determined ranged from 190 to 303 gpd/sf or  $9.0 \times 10^{-3}$  cm/sec to  $1.4 \times 10^{-2}$  cm/sec which is within the range for the fine to medium sand logged in each well boring.

**Geotechnical & Environmental Services**

P. O. Box 354 • Mt. Sidney, VA 24467 • (703) 248-0610

UST Compliance Services • Environmental Site Assessments  
Contamination Studies • Landfill Studies • Geotechnical Investigations

In addition to the short pump testing of MW-1 through MW-4, an eight (8) hour pump test was performed on MW-5. The pump test was performed at a pumping rate of 20 gpm with the four (4) inch submersible pump setting at twenty (20) feet, five (5) feet above the well bottom. Water level changes (drawdowns) were measured in MW-1, MW-4, MW-6 (observation well) and in the pumping well (MW-5) during the eight (8) hour period. The water pumped from the test well (MW-5) was discharged on site east of the pumping well and each monitoring well.

Utilizing the time-drawdown data for each monitoring well, an average hydraulic conductivity value was calculated using a modification of the equilibrium well formula for unconfined aquifers found in "Groundwater and Well" by Johnson Division UOP. The average value calculated was 1,290 gpd/sf or  $6.1 \times 10^{-2}$  cm/sec. An aquifer transmissivity of 107,384 gpd/ft was determined from the time-drawdown data from MW-6 (nearest well) utilizing aquifer analysis software titled Jacobfit. This software uses Jacob's form of the Theis equation and least squares method of analysis to determine transmissivity and storage coefficient. The time-drawdown curve for MW-6, labeled as OM-1, is attached.

To determine the optimum number of recovery wells and corresponding pumping rates required to provide hydraulic isolation, a computer software capture analysis was performed utilizing the pump test data from the eight (8) hour pump test, the average calculated hydraulic gradient and an estimated effective porosity of .20. Based on this analysis, capture of all groundwater to assure no off site groundwater flow can be accomplished by either two (2) wells pumping at 25 gpm each or three (3) wells pumping at 12.5 gpm each. The site plans (plate 2 and 3) showing the locations of the required recovery wells for each scenario and showing the flow lines during continuous pumping are attached.

Using the two (2) well scenario, the existing MW-5 can be utilized with the addition of one (1) more four (4) inch diameter well to a depth of twenty-five (25) feet. The three (3) well scenario assumes the use of three (3) two (2) inch diameter, five (5) feet long well points installed to a depth of fifteen (15) feet at the locations shown on Plate 3.

Ms. Dorothy Small  
Fort Story Bioremediation Project/E-9317

The major advantage of the three (3) well scenario is that less groundwater pumping would be required to achieve the same results which may be very important considering all pumped water must stay on site. The location of the three (3) wells for this scenario should also be outside the planned treatment area making installation less complicated.

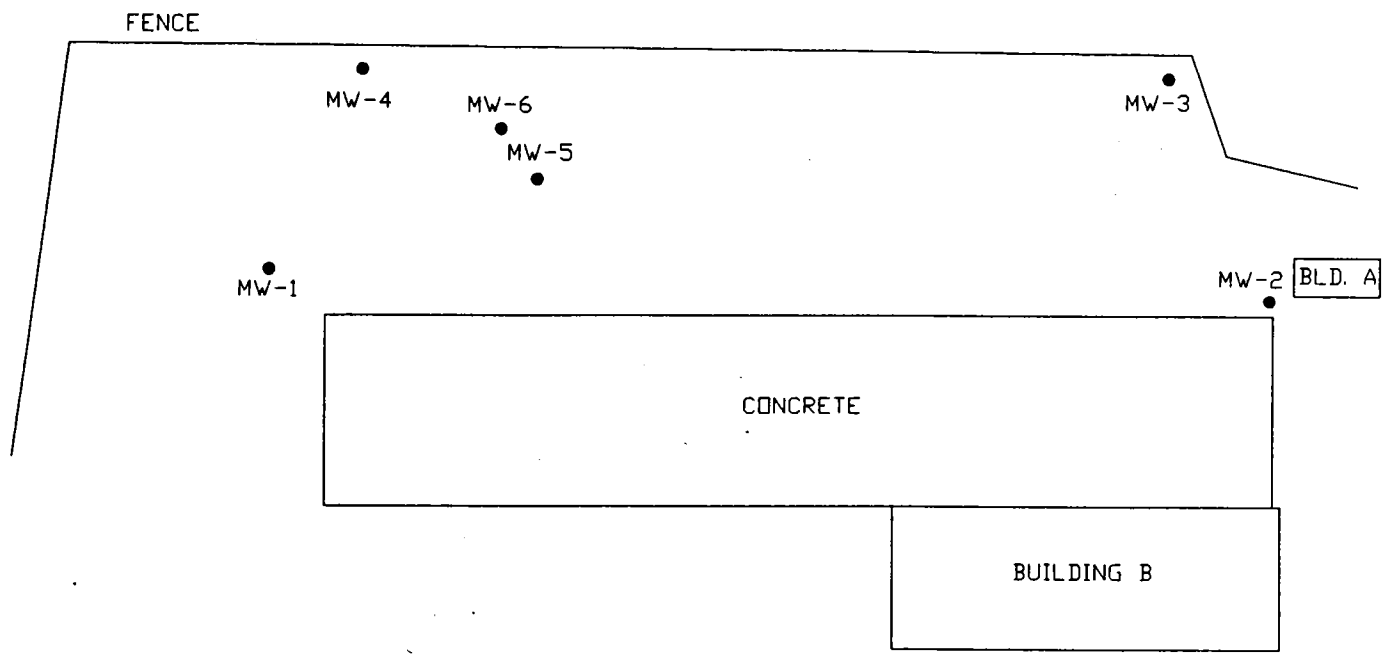
We are prepared to supervise the installation of the chosen recovery well system the week of May 17. If there are any changes in your work plan or if you have any questions pertaining to our recommendations please let me know.


Sincerely,

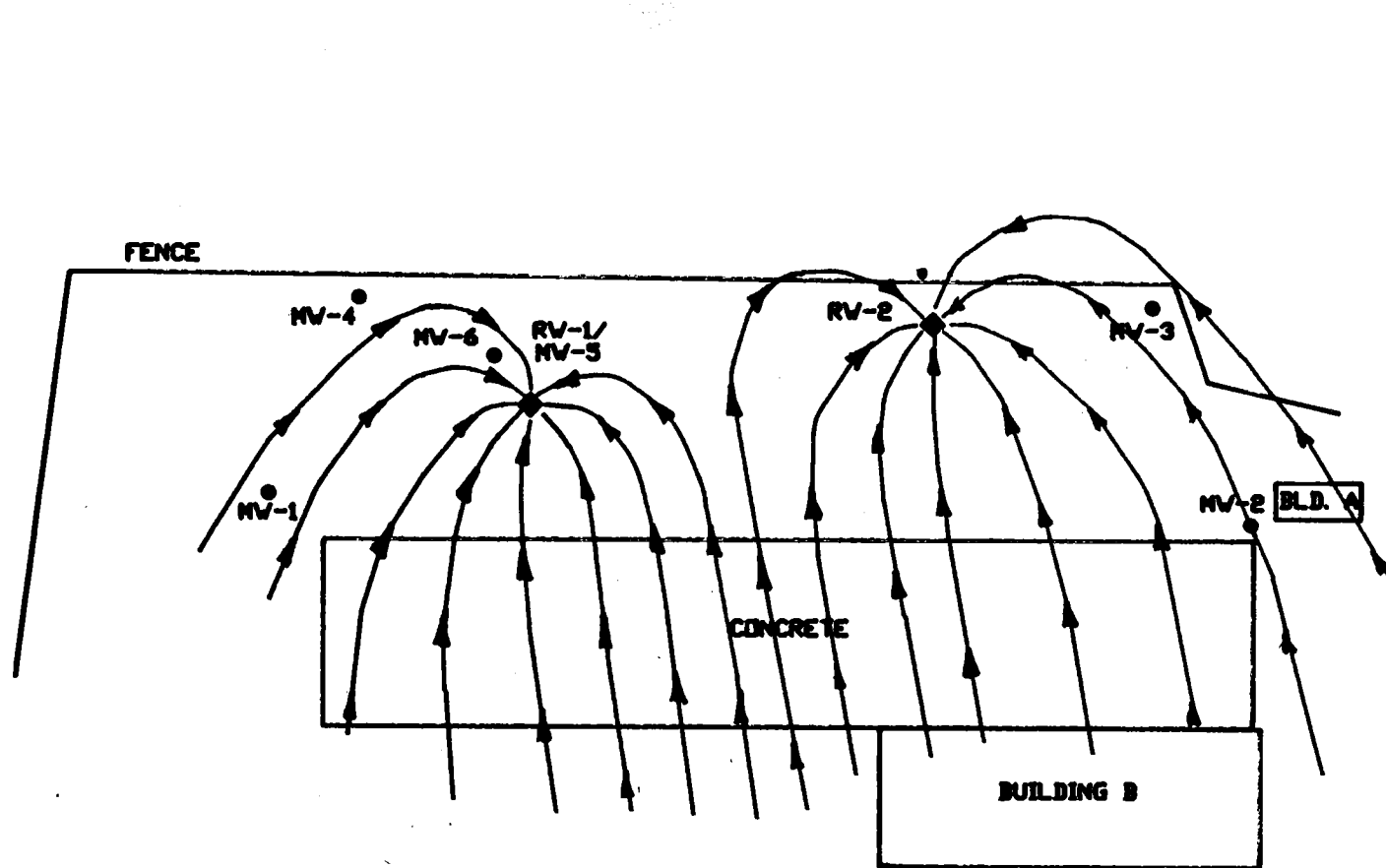
A handwritten signature in black ink, appearing to read "William J. Barker". The signature is fluid and cursive, with the first name "William" and last name "Barker" clearly distinguishable.

William J. Barker, P.G.  
Principal Hydrogeologist

WJB: jlc  
Attached.




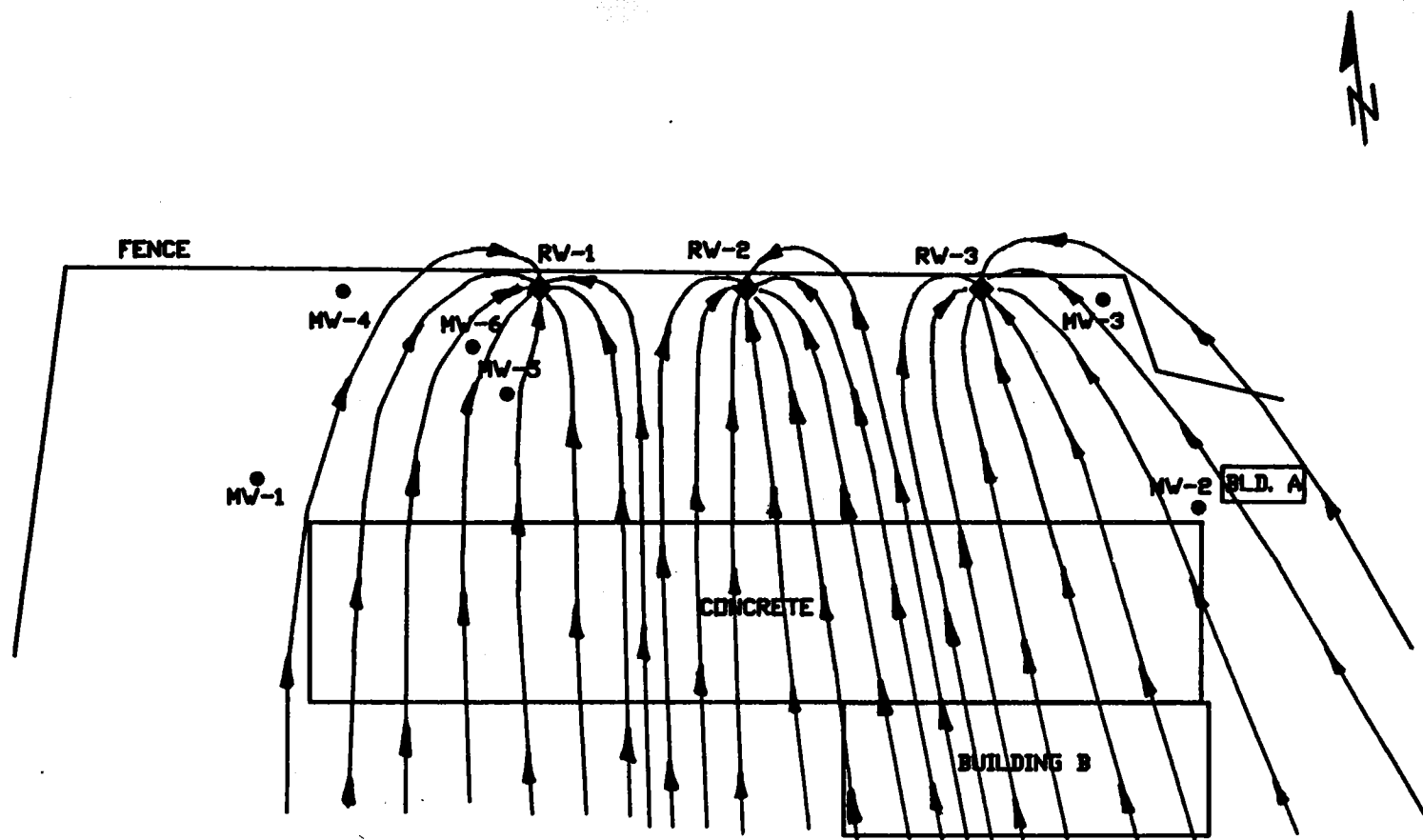
CLIENT: SOLUTIONS ENVIRONMENTAL ASSOCIATES		
PROJECT: FORT STORY	JOB#: E-9317	
Title: SITE PLAN	Plate: 1	
GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC		



RV - Location of 4" diameter recovery well

Pathlines & Traveltimes (PAT)  
Capture Software

CLIENT: SOLUTIONS ENVIRONMENTAL ASSOCIATES		
PROJECT: FORT STORY BIOREMEDIATION SITE	JOB#: E-9317	
Title: TWO WELL RECOVERY SYSTEM	Plate: 2	
GEOTECHNICAL & ENVIRONMENTAL SERVICES, INC		



● RV - Recovery well locations

CLIENT: SOLUTIONS ENVIRONMENTAL ASSOCIATES

PROJECT: FORT STORY BIOREMEDIATION SITE

Title: THREE WELL RECOVERY SYSTEM

JOB#: E-9317

Plate: 3

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**PATHLINES AND TRAVELTIMES**

May 12, 1993

**THREE WELL OPTION AT 12.5 gpm EACH**

**MODEL PARAMETERS**

**MODEL TYPE**

infinite

**DIMENSION OF FLOW FIELD**

x-minimum	[ m ]	0
x-maximum	[ m ]	300
y-minimum	[ m ]	0
y-maximum	[ m ]	250

**AQUIFER PARAMETERS**

hydraulic conductivity	[ m/s ]	.00061
effective porosity	[ - ]	.25
thickness of aquifer	[ m ]	8
hydraulic gradient	[ - ]	.002
direction of natural flow	[ 0-360 ]	280

**TIME PARAMETERS**

maximum time	[ d ]	200
time increment	[ d ]	1
time between markers	[ d ]	10

**WELL DATA**

limit radius around well	[ m ]	5
number of wells	[ 0-30 ]	3

X [ m ]	Y [ m ]	Q [ m <sup>3</sup> /s ]	
115	138	.00079	new well
150	138	.00079	new well
190	138	.00079	new well

**LANDMARKS**

number of landmarks	[ 0-5 ]	1
corners of landmark # 1	[ 1-10 ]	4

corner points of polygon # 1

X (1) [ m ]	75	Y (1) [ m ]	100
X (2) [ m ]	75	Y (2) [ m ]	143
X (3) [ m ]	214.3	Y (3) [ m ]	141.8
X (4) [ m ]	227.4	Y (4) [ m ]	100



**PATHLINES AND TRAVELTIMES**  
 May 12, 1993  
**TWO WELL OPTION AT 25 gpm EACH**

**MODEL PARAMETERS**

MODEL TYPE  
 infinite

**DIMENSION OF FLOW FIELD**

x-minimum	[ m ]	0
x-maximum	[ m ]	300
y-minimum	[ m ]	0
y-maximum	[ m ]	250

**AQUIFER PARAMETERS**

hydraulic conductivity	[ m/s ]	.00061
effective porosity	[ - ]	.25
thickness of aquifer	[ m ]	8
hydraulic gradient	[ - ]	.002
direction of natural flow	[ 0-360 ]	280

**TIME PARAMETERS**

maximum time	[ d ]	200
time increment	[ d ]	1
time between markers	[ d ]	10

**WELL DATA**

limit radius around well	[ m ]	5
number of wells	[ 0-30 ]	2

X [ m ]	Y [ m ]	Q [ m <sup>3</sup> /s ]	
119.4	121.6	.001575	existing MW-6
175	135	.001575	new well

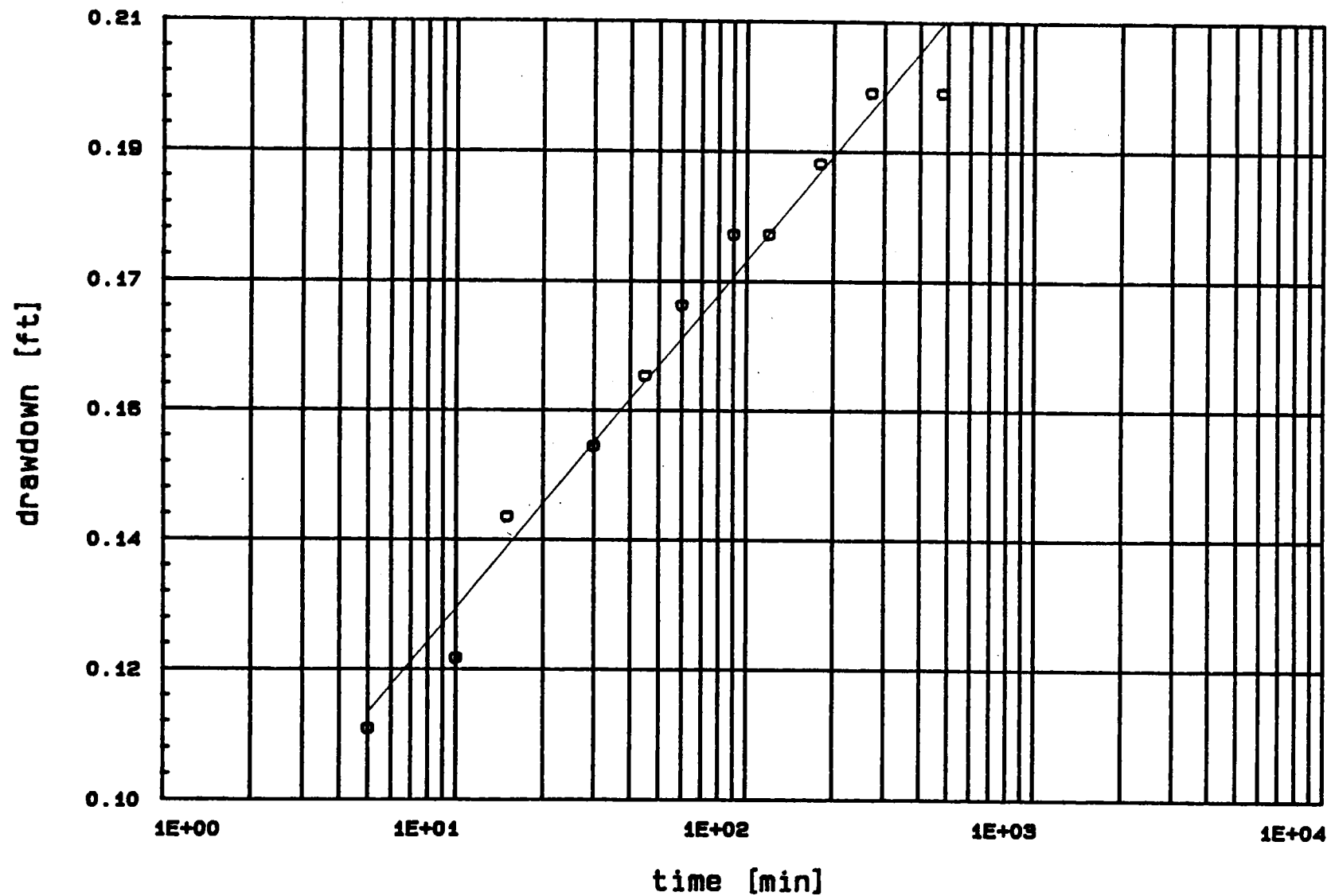
**LANDMARKS**

number of landmarks	[ 0-5 ]	1
corners of landmark # 1	[ 1-10 ]	4

corner points of polygon # 1

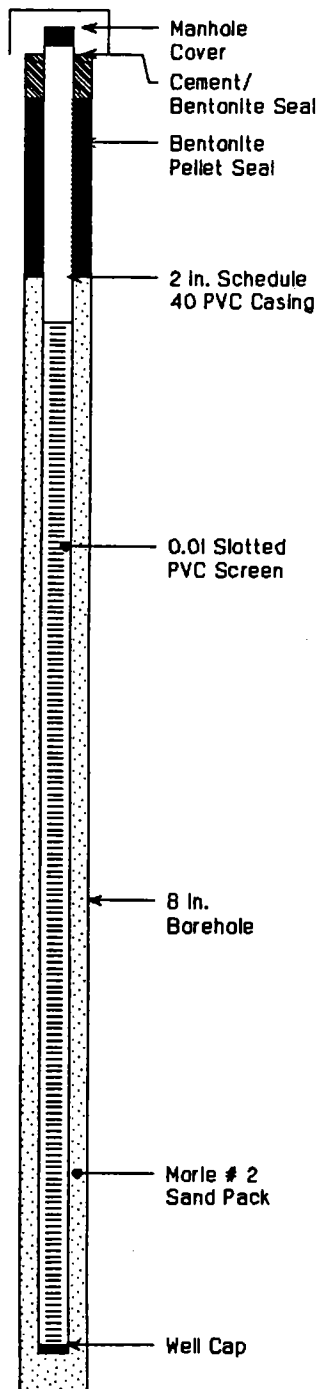
X (1) [ m ]	75	Y (1) [ m ]	100
X (2) [ m ]	75	Y (2) [ m ]	143
X (3) [ m ]	214.3	Y (3) [ m ]	141.8
X (4) [ m ]	227.4	Y (4) [ m ]	100

# Fort Story Pump Test OW-1



FILE: E93170W1

T = 107384 [gpd/ft]  
S = .646E-03



DEPTH (feet)

ELEVATION

**BLOWS/FT.**

**PID (ppm)**

**SAMPLE NO.**

## SOIL CLASS

## GRAPHIC LOG

## MATERIALS DESCRIPTION

**SP**

CD

**SP**

94.6

9

92.9  
92.6

12

3

SP

CD

**SP**

Tan to buff fine SAND, trace silt and organics, loose, dry to moist

Buff to orange brown, fine SAND,  
loose, to medium consistency,  
moist

Saturated below 3.7 FT.

Buff to light grey, fine-  
medium SAND, loose to medium  
consistency

BOTTOM OF HOLE AT: 15.4 FT.

Static water level at: 3.7 FT. (92.98)



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## LOG OF BORING MW-1...PROJ. E-9317

CLIENT NAME Solutions Environmental

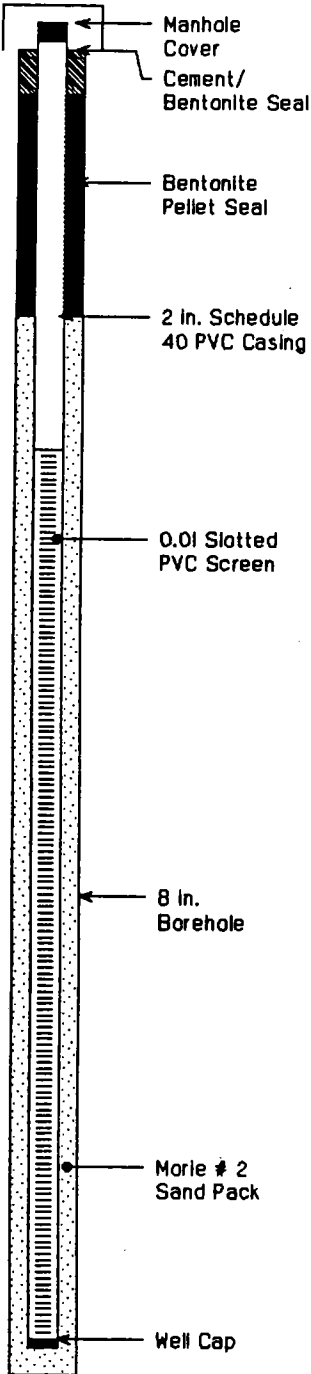


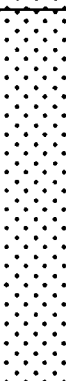
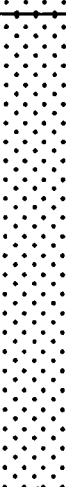
LOCATION Fort Story, Virginia

SURFACE ELEVATION 98.88 Feet

DRILLING METHOD H. S. Augers

TOTAL DEPTH OF HOLE 15.4 Feet

GEOLOGIST William J. Barker (4/28/83)

WELL CONSTRUCTION	DEPTH (feet)	ELEVATION	BLOWS/FT.	PID (ppm)	SAMPLE NO.	SOIL CLASS	GRAPHIC LOG	MATERIALS DESCRIPTION
					1	SP		Tan to brown fine-medium SAND, trace organics and debris, moist  (FILL)
	5	98.4 ↓ 83.0	13  20		2  3	SP		Block coal mixed with brown fine-medium SAND, medium consistency  (FILL)
		83.4 ↓ 83.0	21		4	SP		Light grey with black fine sand trace silt and medium SAND, medium consistency, moist-very moist  Saturated below 8.3 FT.
	10	88.4				SP		Light grey fine-medium SAND, loose to medium consistency, saturated
	15	84.1						BOTTOM OF HOLE AT: 15.3 FT.  Static water level at: 8.35 FT. (83.08)



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## LOG OF BORING MW-2...PROJ. E-9317

CLIENT NAME <u>Solutions Environmental</u>	LOCATION <u>Fort Story, Virginia</u>
SURFACE ELEVATION <u>98.43 Feet</u>	DRILLING METHOD <u>H. S. Augers</u>
TOTAL DEPTH OF HOLE <u>15.3 Feet</u>	GEOLOGIST <u>William J. Barker (4/28/93)</u>

**APPENDIX H**

**SAMPLING AND ANALYTICAL INFORMATION**

CERTIFICATE OF ANALYSIS

---

IT Corporation/Fort Story  
2790 Mosside Boulevard  
Monroeville, PA 15146  
Attn: Tom Mathison

February 11, 1993

---

Job Number: Q301097/099

The Certificate of Analysis is for the following:

Client Project ID: 519029  
Date Received by Lab: 01/22/93  
Number of Samples: Five  
Sample Type: Soil/Water

---

1.0 INTRODUCTION

On January 22, 1993, three soil and two water samples were received at ITAS Pittsburgh, labeled as follows:

Soil: 519029-S001 519029-S003  
519029-S002

Water: 519029-W001  
TRIP BLANK

2.0 ANALYTICAL RESULTS/METHODOLOGY

Results are presented in the enclosed tables and were determined in accordance with Methods 1010, 3010, 3020, 6010, 7060, 7470, 7740, 7841, referenced in Test Methods for Evaluating Solid Waste, USEPA SW-846, 3rd Ed., 1986; Environmental Protection Agency, Contract Laboratory Program, Statement of Work No. 788, Section IV, Exhibit-D, Part E, July, 1988; Federal Register, Vol. 57, No. 227, Tuesday, November 24, 1992, Appendix II.

Reviewed and Approved:

*Veronica Bortot*

---

Veronica Bortot, Project Manager

IT Corporation/Fort Story  
Date: 02/11/93

**IT ANALYTICAL SERVICES  
PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q301097/099

---

## 2.0 ANALYTICAL RESULTS/METHODOLOGY (Continued)

Results are based on sample concentration and expressed in milligrams per liter or parts per million and micrograms per liter or parts per billion. ND denotes that the compound is not detected at or above the indicated detection limit.

## 3.0 QUALITY CONTROL

QA/QC information can be found immediately following the analytical data.

IT Corporation/Fort Story  
Date: 02/11/93

**IT ANALYTICAL SERVICES  
PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q301097/099

---

General Chemistry Analysis

Client Sample ID: See below  
Sample Date: 01/21/93  
Analysis Date: 01/27/93

Client Sample ID	Lab Sample ID	Ignitability	pH
519029-W001	Q30109901	> 140 °F / > 140 °F	6.82/6.71



IT Corporation/Fort Story  
Date: 02/11/93

**IT ANALYTICAL SERVICES  
PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q301097/099

---

Volatile Organic Compounds

Client Sample ID: 519029-W001  
Sample Date: 01/21/93  
Lab Sample ID: Q30109901  
Analysis Date: 01/28/93

Compound	Concentration $\mu\text{g/L}$	Compound	Concentration $\mu\text{g/L}$
Chloromethane	ND10	cis-1,3-Dichloropropene	ND5
Bromomethane	ND10	Trichloroethene	ND5
Vinyl chloride	ND10	Dibromochloromethane	ND5
Chloroethane	ND10	1,1,2-Trichloroethane	ND5
Methylene chloride	ND5	Benzene	ND5
Acetone	ND100	trans-1,3-Dichloropropene	ND5
Carbon disulfide	ND5	2-Chloroethylvinylether	ND10
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND50
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND50
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND100	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND50	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
1,2-Dichloropropane	ND5		

Surrogate Spike  
Percent Recovery

Toluene-d <sub>8</sub>	96%
Bromofluorobenzene	95%
1,2-Dichloroethane-d <sub>4</sub>	90%

IT Corporation/Fort Story  
Date: 02/11/93

**IT ANALYTICAL SERVICES  
PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q301097/099

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Volatile Organic Compounds

Client Sample ID: TRIP BLANK  
Sample Date: 01/21/93  
Lab Sample ID: Q30109902  
Analysis Date: 01/28/93

Compound	Concentration $\mu\text{g/L}$	Compound	Concentration $\mu\text{g/L}$
Chloromethane	ND10	cis-1,3-Dichloropropene	ND5
Bromomethane	ND10	Trichloroethene	ND5
Vinyl chloride	ND10	Dibromochloromethane	ND5
Chloroethane	ND10	1,1,2-Trichloroethane	ND5
Methylene chloride	ND5	Benzene	ND5
Acetone	ND100	trans-1,3-Dichloropropene	ND5
Carbon disulfide	ND5	2-Chloroethylvinylether	ND10
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND50
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND50
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND100	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND50	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
1,2-Dichloropropane	ND5		

Surrogate Spike  
Percent Recovery

Toluene-d <sub>8</sub>	100%
Bromofluorobenzene	109%
1,2-Dichloroethane-d <sub>4</sub>	94%

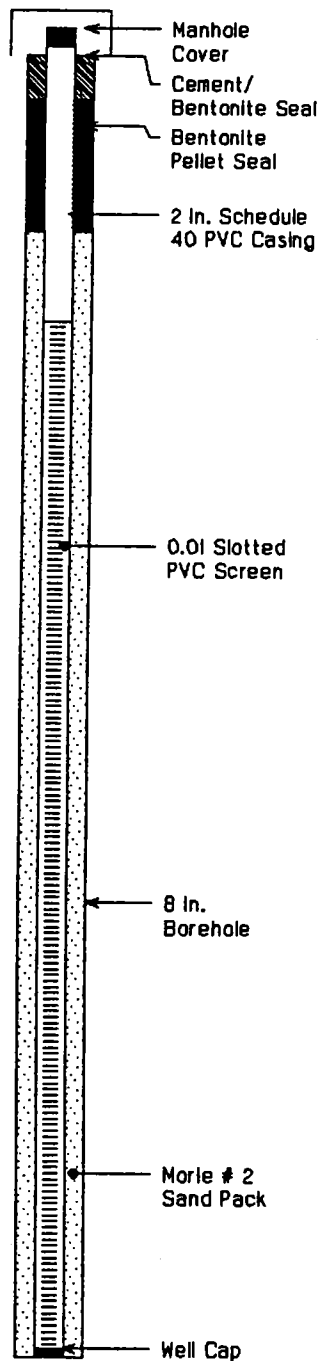
WELL CONSTRUCTION	DEPTH (feet)	ELEVATION	BLOWS/FT.	PTD (ppm)	SAMPLE NO.	SOIL CLASS	GRAPHIC LOG	MATERIALS DESCRIPTION
Manhole Cover Cement/ Bentonite Seal		98.3	18		1	SP		Brown fine SAND with some organics
Bentonite Pellet Seal		98.0	10		2	GM		Stone fill
2 in. Schedule 40 PVC Casing		92.8				SP		Tan to buff, fine SAND, trace silt and medium sand, moist
0.01 Slotted PVC Screen	5	92.3	14	3		SP		Light grey to tan fine to medium SAND, loose to medium consistency
8 in. Borehole	10							Becomes fine-coarse sand below 10 FT.
Morle # 2 Sand Pack	15	81.8						BOTTOM OF HOLE AT: 15.7 FT.
Well Cap								Static water level at: 4.5 FT. (92.87)



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SERVICES, INC.**

## LOG OF BORING MW-3...PROJ. E-9317

CLIENT NAME <u>Solutions Environmental</u>	LOCATION <u>Fort Story, Virginia</u>
SURFACE ELEVATION <u>97.37 Feet</u>	DRILLING METHOD <u>H. S. Augers</u>
TOTAL DEPTH OF HOLE <u>15.7 Feet</u>	GEOLOGIST <u>William J. Barker, (4/28/83)</u>

WELL  
CONSTRUCTION

DEPTH (feet)

ELEVATION

BLOWS/FT.

PID (ppm)

SAMPLE NO.

SOIL CLASS

GRAPHIC LOG

MATERIALS  
DESCRIPTION

SP

Tan fine SAND, trace silt, dry  
to moist, loose

SP

Tan to orange-brown, fine-  
medium SAND, moist to very  
moist, medium dense

SP

Light grey, fine-medium SAND,  
little coarse sand, saturated

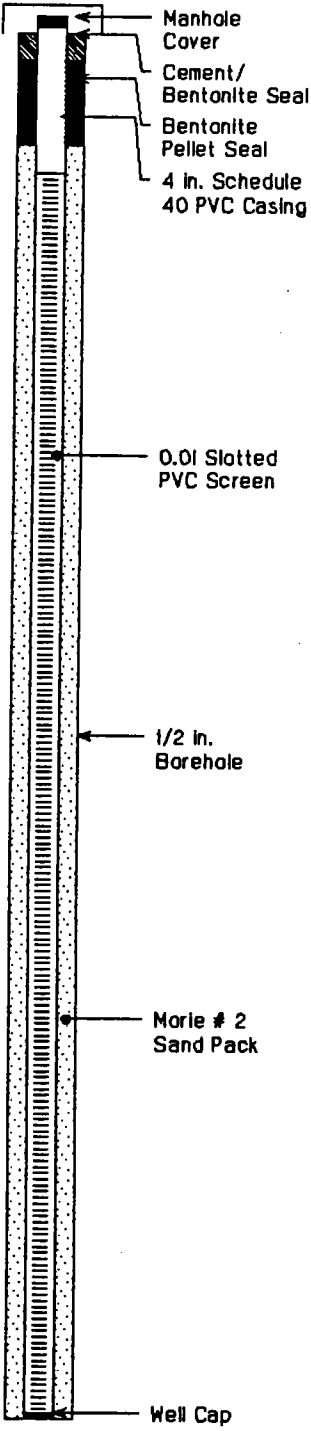


BOTTOM OF HOLE AT: 15.0 FT.

Static water level at: 4.3 FT. (82.57)

## LOG OF BORING MW-4...PROJ. E-9317


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ENVIRONMENTAL  
SERVICES, INC.**

CLIENT NAME <u>Solutions Environmental</u>	LOCATION <u>Fort Story, Virginia</u>
SURFACE ELEVATION <u>88.87 Feet</u>	DRILLING METHOD <u>Augers</u>
TOTAL DEPTH OF HOLE <u>15.0 Feet</u>	GEOLOGIST <u>William J. Barker (4/28/93)</u>

WELL CONSTRUCTION	DEPTH (feet)	ELEVATION	BLOWS/FT.	PID (ppm)	SAMPLE NO.	SOIL CLASS	GRAPHIC LOG	MATERIALS DESCRIPTION
	5	92.8 ↓	15		1	SP		Light to medium brown, fine SAND, little medium SAND, trace silt, moist-very moist, loose to medium consistency
		88.9	12		2	SP		Buff to light grey fine-medium SAND, medium consistency, saturated
	10	85.9				SP		Tan to light grey fine-medium SAND, little coarse SAND and trace fine gravel, loose to medium consistency, saturated
	20							
Well Cap	25	70.8						BOTTOM OF HOLE AT: 25.0 FT.  Static water level at: 3.3 FT. (82.80)



**GEOTECHNICAL &  
ENVIRONMENTAL  
SERVICES, INC.**

## LOG OF BORING MW-5...PROJ. E-9317

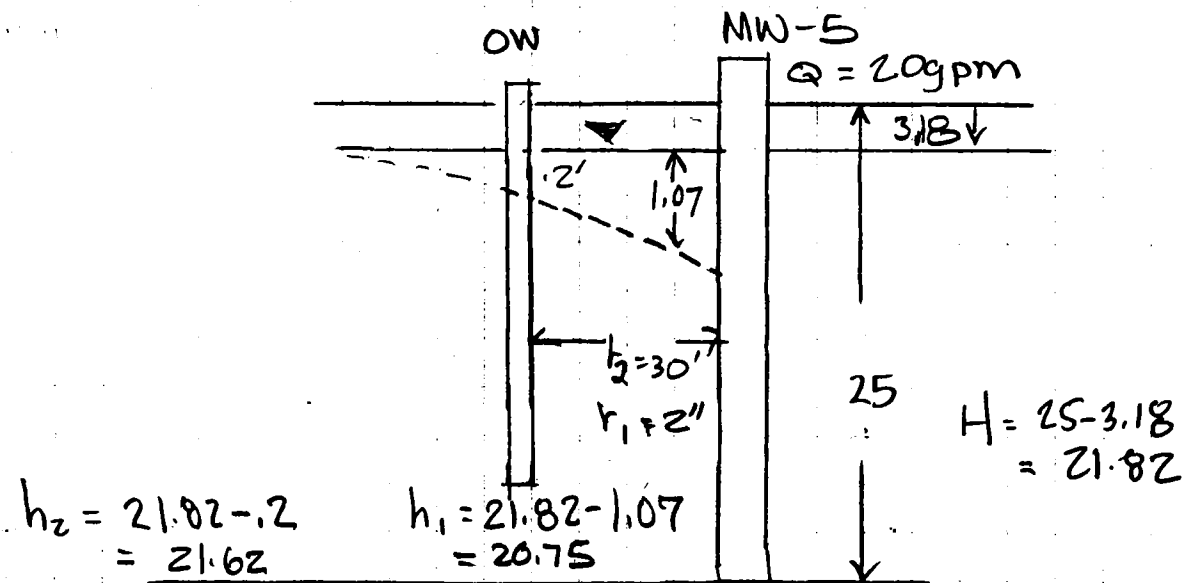
CLIENT NAME <u>Solutions Environmental</u>	LOCATION <u>Fort Story, Virginia</u>
SURFACE ELEVATION <u>85.80 Feet</u>	DRILLING METHOD <u>H.S. Augers</u>
TOTAL DEPTH OF HOLE <u>25.0 Feet</u>	GEOLOGIST <u>William J. Barker (4/28/83)</u>

# FORT STORY BIOREMEDIATION PROJECT AQUIFER ANALYSIS

DETERMINE HYDRAULIC CONDUCTIVITY (K) FOR  
UNCONFINED (WATER TABLE) AQUIFER

FORMULA :  $K = \frac{1055 Q \log R_2/R_1}{(h_2^2 - h_1^2)}$  from "Groundwater & Wells" pg 105

$K$  = hydraulic conductivity in gpd/sf  
 $Q$  = pumping rate in gpm  
 $r_1$  = radius of well  
 $r_2$  = distance to observation well (ow)  
 $h_2$  = saturated thickness at ow  
 $h_1$  = saturated thickness at pumping well



$$K = \frac{1055 (20) \log 30/.166}{(21.62)^2 - (20.75)^2} = \frac{47623}{36.9}$$

$$K = 1,290 \text{ gpd/sf}$$

$$K = 6.1 \times 10^{-4} \text{ M/s or } 6.1 \times 10^{-2} \text{ cm/sec}$$

# CALCULATE HYDRAULIC CONDUCTIVITY AT MW LOCATIONS

$$\text{FORMULA: } K = \frac{1055Q \log R/r}{(H^2 - h^2)}$$

$$\text{MW1: } Q = 6 \text{ gpm}; R = .33; r = .08 \\ H = 15 - 3.7 = 11.3; h = 15 - 4.4 = 10.6$$

$$K = \frac{1055(6) \log .33/.08}{(11.3^2) - (10.6)^2} = \frac{3895.6}{15.33}$$

$$K = 254.1 \text{ gpd/sf}$$

$$K = 1.2 \times 10^{-4} \text{ m/s or } 1.2 \times 10^{-2} \text{ cm/s}$$

---

$$\text{MW 2: } Q = 6 \text{ gpm}; R = .33; r = .08 \\ H = 15 - 6.5 = 8.5; h = 15 - 7.2 = 7.8$$

$$K = \frac{1055(6) \log .33/.08}{(8.5)^2 - (7.2)^2} = \frac{3895}{20.41}$$

$$K = 190.8 \text{ gpd/sf}$$

$$K = 9.0 \times 10^{-5} \text{ m/s or } 9.0 \times 10^{-3} \text{ cm/s}$$

---

$$\text{MW 3: } Q = 6 \text{ gpm}; R = .33; r = .08 \\ H = 15 - 4.5 = 10.5; h = 15 - 5.13 = 9.87$$

$$K = \frac{1055(6) \log .33/.08}{(10.5)^2 - (9.87)^2} = \frac{3895}{12.84}$$

$$K = 303.3 \text{ gpd/sf}$$

$$K = 1.43 \times 10^{-4} \text{ m/s or } 1.4 \times 10^{-2} \text{ cm/s}$$

IT Corporation/Fort Story  
Date: 02/11/93

**IT ANALYTICAL SERVICES  
PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q301097/099

---

Volatile Organic Compounds

Lab Sample ID: METHOD BLANK  
Analysis Date: 01/28/93

Compound	Concentration $\mu\text{g/L}$	Compound	Concentration $\mu\text{g/L}$
Chloromethane	ND10	cis-1,3-Dichloropropene	ND5
Bromomethane	ND10	Trichloroethene	ND5
Vinyl chloride	ND10	Dibromochloromethane	ND5
Chloroethane	ND10	1,1,2-Trichloroethane	ND5
Methylene chloride	ND5	Benzene	ND5
Acetone	ND100	trans-1,3-Dichloropropene	ND5
Carbon disulfide	ND5	2-Chloroethylvinylether	ND10
1,1-Dichloroethene	ND5	Bromoform	ND5
1,1-Dichloroethane	ND5	4-Methyl-2-pentanone	ND50
1,2-Dichloroethene (total)	ND5	2-Hexanone	ND50
Chloroform	ND5	Tetrachloroethene	ND5
1,2-Dichloroethane	ND5	1,1,2,2-Tetrachloroethane	ND5
2-Butanone	ND100	Toluene	ND5
1,1,1-Trichloroethane	ND5	Chlorobenzene	ND5
Carbon tetrachloride	ND5	Ethylbenzene	ND5
Vinyl acetate	ND50	Styrene	ND5
Bromodichloromethane	ND5	Xylenes (total)	ND5
1,2-Dichloropropane	ND5		

Surrogate Spike  
Percent Recovery

Toluene-d <sub>8</sub>	97%
Bromofluorobenzene	94%
1,2-Dichloroethane-d <sub>4</sub>	88%



IT Corporation/Fort Story

Date: 02/11/93

IT ANALYTICAL SERVICES

PITTSBURGH, PA

Client Project ID: 519029

Job Number: Q301097/099

## Semivolatile Organic Compounds

Client Sample ID: 519029-W001

Sample Date: 01/21/93

Lab Sample ID: Q30109901

Extraction Date: 01/27/93

Analysis Date: 02/01/93

Compound	Concentration µg/L	Compound	Concentration µg/L
Phenol	ND10	3-Nitroaniline	ND50
bis(2-Chloroethyl)ether	ND10	Acenaphthene	ND10
2-Chlorophenol	ND10	2,4-Dinitrophenol	ND50
1,3-Dichlorobenzene	ND10	4-Nitrophenol	ND50
1,4-Dichlorobenzene	ND10	Dibenzofuran	ND10
Benzyl alcohol	ND20	2,4-Dinitrotoluene	ND10
1,2-Dichlorobenzene	ND10	Diethylphthalate	ND10
2-Methylphenol	ND10	4-Chlorophenyl-phenylether	ND10
bis(2-Chloroisopropyl)ether	ND10	Fluorene	ND10
4-Methylphenol	ND10	4-Nitroaniline	ND50
N-Nitroso-di-n-propylamine	ND10	4,6-Dinitro-2-methylphenol	ND50
Hexachloroethane	ND10	N-Nitrosodiphenylamine	ND10
Nitrobenzene	ND10	4-Bromophenyl-phenylether	ND10
Isophorone	ND10	Hexachlorobenzene	ND10
2-Nitrophenol	ND10	Pentachlorophenol	ND50
2,4-Dimethylphenol	ND10	Phenanthrene	ND10
Benzoic acid	ND50	Anthracene	ND10
bis(2-Chloroethoxy)methane	ND10	Di-n-butylphthalate	ND50
2,4-Dichlorophenol	ND10	Fluoranthene	ND10
1,2,4-Trichlorobenzene	ND10	Pyrene	ND10
Naphthalene	ND10	Butylbenzylphthalate	ND10
4-Chloroaniline	ND20	3,3'-Dichlorobenzidine	ND20
Hexachlorobutadiene	ND10	Benzo(a)anthracene	ND10
4-Chloro-3-methylphenol	ND20	Chrysene	ND10
2-Methylnaphthalene	ND10	bis(2-Ethylhexyl)phthalate	ND50
Hexachlorocyclopentadiene	ND10	Di-n-octylphthalate	ND50
2,4,6-Trichlorophenol	ND10	Benzo(b)fluoranthene	ND10
2,4,5-Trichlorophenol	ND10	Benzo(k)fluoranthene	ND10
2-Chloronaphthalene	ND10	Benzo(a)pyrene	ND10
2-Nitroaniline	ND50	Indeno(1,2,3-cd)pyrene	ND10
Dimethylphthalate	ND10	Dibenzo(a,h)anthracene	ND10
Acenaphthylene	ND10	Benzo(g,h,i)perylene	ND10
2,6-Dinitrotoluene	ND10		

## Surrogate Spike Percent Recovery:

Nitrobenzene-d <sub>5</sub>	71%	Phenol-d <sub>6</sub>	29%
2-Fluorobiphenyl	75%	2-Fluorophenol	48%
Terphenyl	80%	2,4,6-Tribromophenol	93%

## Semivolatile Organic Compounds

Lab Sample ID: METHOD BLANK

Extraction Date: 01/27/93

Analysis Date: 01/29/93

Compound	Concentration µg/L	Compound	Concentration µg/L
Phenol	ND10	3-Nitroaniline	ND50
bis(2-Chloroethyl)ether	ND10	Acenaphthene	ND10
2-Chlorophenol	ND10	2,4-Dinitrophenol	ND50
1,3-Dichlorobenzene	ND10	4-Nitrophenol	ND50
1,4-Dichlorobenzene	ND10	Dibenzofuran	ND10
Benzyl alcohol	ND20	2,4-Dinitrotoluene	ND10
1,2-Dichlorobenzene	ND10	Diethylphthalate	ND10
2-Methylphenol	ND10	4-Chlorophenyl-phenylether	ND10
bis(2-Chloroisopropyl)ether	ND10	Fluorene	ND10
4-Methylphenol	ND10	4-Nitroaniline	ND50
N-Nitroso-di-n-propylamine	ND10	4,6-Dinitro-2-methylphenol	ND50
Hexachloroethane	ND10	N-Nitrosodiphenylamine	ND10
Nitrobenzene	ND10	4-Bromophenyl-phenylether	ND10
Isophorone	ND10	Hexachlorobenzene	ND10
2-Nitrophenol	ND10	Pentachlorophenol	ND50
2,4-Dimethylphenol	ND10	Phenanthrene	ND10
Benzoic acid	ND50	Anthracene	ND10
bis(2-Chloroethoxy)methane	ND10	Di-n-butylphthalate	ND10
2,4-Dichlorophenol	ND10	Fluoranthene	ND10
1,2,4-Trichlorobenzene	ND10	Pyrene	ND10
Naphthalene	ND10	Butylbenzylphthalate	ND10
4-Chloroaniline	ND20	3,3'-Dichlorobenzidine	ND20
Hexachlorobutadiene	ND10	Benzo(a)anthracene	ND10
4-Chloro-3-methylphenol	ND20	Chrysene	ND10
2-Methylnaphthalene	ND10	bis(2-Ethylhexyl)phthalate	ND10
Hexachlorocyclopentadiene	ND10	Di-n-octylphthalate	ND10
2,4,6-Trichlorophenol	ND10	Benzo(b)fluoranthene	ND10
2,4,5-Trichlorophenol	ND10	Benzo(k)fluoranthene	ND10
2-Chloronaphthalene	ND10	Benzo(a)pyrene	ND10
2-Nitroaniline	ND50	Indeno(1,2,3-cd)pyrene	ND10
Dimethylphthalate	ND10	Dibenzo(a,h)anthracene	ND10
Acenaphthylene	ND10	Benzo(g,h,i)perylene	ND10
2,6-Dinitrotoluene	ND10		

## Surrogate Spike Percent Recovery:

Nitrobenzene-d <sub>5</sub>	58%	Phenol-d <sub>6</sub>	24%
2-Fluorobiphenyl	72%	2-Fluorophenol	36%
Terphenyl	87%	2,4,6-Tribromophenol	71%

IT Corporation/Fort Story  
Date: 02/11/93

IT ANALYTICAL SERVICES  
PITTSBURGH, PA

Client Project ID: 519029

Job Number: Q301097/099

---

Total Metals Analysis

Client Sample ID: 519029-W001  
Sample Date: 01/21/93  
Lab Sample ID: Q30109901  
Analysis Date: 01/26,27,29/93  
Mercury: 01/26/93

Parameter	Concentration µg/L	Matrix Spike Percent Recovery
Aluminum	ND100	103%
Antimony	ND60.0	98%
Arsenic	58.7	99%
Barium	50.3	105%
Beryllium	ND5.0	96%
Cadmium	ND5.0	93%
Calcium	7000	-
Chromium	ND10.0	97%
Cobalt	ND20.0	102%
Copper	ND25.0	101%
Iron	1480	140%
Lead	ND50.0	94%/95%
Magnesium	823	-
Manganese	12.3	97%
Mercury	ND0.20	105%
Nickel	ND40.0	99%
Potassium	5560	-
Selenium	ND5.0	103%
Silver	ND10.0	88%
Sodium	4590	-
Thallium	ND10.0	31%
Vanadium	ND20.0	99%
Zinc	ND20.0	106%

IT Corporation/Fort Story  
Date: 02/11/93

IT ANALYTICAL SERVICES  
PITTSBURGH, PA

Client Project ID: 519029

Job Number: Q301097/099

---

Total Metals Analysis

Lab Sample ID: METHOD BLANK  
Analysis Date: 01/26,27,29/93  
Mercury: 01/26/93

Parameter	Concentration $\mu\text{g/L}$
Aluminum	ND100
Antimony	ND60.0
Arsenic	ND10.0
Barium	ND10.0
Beryllium	ND5.0
Cadmium	ND5.0
Calcium	ND500.0
Chromium	ND10.0
Cobalt	ND20.0
Copper	ND25.0
Iron	ND30.0
Lead	ND50.0
Magnesium	ND500.0
Manganese	ND10.0
Mercury	ND0.20
Nickel	ND40.0
Potassium	ND2000
Selenium	ND5.0
Silver	ND10.0
Sodium	ND500.0
Thallium	ND10.0
Vanadium	ND20.0
Zinc	ND20.0

IT Corporation/Fort Story

Date: 02/11/93

IT ANALYTICAL SERVICES  
PITTSBURGH, PA

Client Project ID: 519029

Job Number: Q301097/099

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Pesticide/PCB Analysis

Client Sample ID: 519029-W001

Sample Date: 01/21/93

Lab Sample ID: Q30109901

Extraction Date: 01/28/93

Analysis Date: 02/02, 09/93

Compound	Concentration µg/L
alpha-BHC	ND0.03
gamma-BHC	ND0.04
beta-BHC	ND0.06
Heptachlor	0.03
delta-BHC	ND0.09
Aldrin	ND0.04
Heptachlor epoxide	ND0.83
Tecnical Chlordane	ND0.14
Endosulfan I	ND0.14
4,4'-DDE	ND0.04
Dieldrin	ND0.02
Endrin	ND0.06
4,4'-DDD	ND0.11
Endosulfan II	ND0.04
4,4'-DDT	ND0.12
Endrin aldehyde	ND0.23
Endosulfan sulfate	ND0.66
Methoxychlor	ND1.8
Toxaphene	ND2.4
Aroclor 1016	ND0.65
Aroclor 1221	ND0.65
Aroclor 1232	ND0.65
Aroclor 1242	ND0.65
Aroclor 1248	ND0.65
Aroclor 1254	ND0.65
Aroclor 1260	ND0.65
	Surrogate Spike
	Percent Recovery
Tetrachlorometaxylene	82%
Dibutylchloredate	58%

IT Corporation/Fort Story  
Date: 02/11/93

IT ANALYTICAL SERVICES  
PITTSBURGH, PA

Client Project ID: 519029

Job Number: Q301097/099

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Pesticide/PCB Analysis

Lab Sample ID: Method Blank  
Extraction Date: 01/28/93  
Analysis Date: 02/02, 09/93

Compound	Concentration µg/L
alpha-BHC	ND0.03
gamma-BHC	ND0.04
beta-BHC	ND0.06
Heptachlor	ND0.03
delta-BHC	ND0.09
Aldrin	ND0.04
Heptachlor epoxide	ND0.83
Technical Chlordane	ND0.14
Endosulfan I	ND0.14
4,4'-DDE	ND0.04
Dieldrin	ND0.02
Endrin	ND0.06
4,4'-DDD	ND0.11
Endosulfan II	ND0.04
4,4'-DDT	ND0.12
Endrin aldehyde	ND0.23
Endosulfan sulfate	ND0.66
Methoxychlor	ND1.8
Toxaphene	ND2.4
Aroclor 1016	ND0.65
Aroclor 1221	ND0.65
Aroclor 1232	ND0.65
Aroclor 1242	ND0.65
Aroclor 1248	ND0.65
Aroclor 1254	ND0.65
Aroclor 1260	ND0.65
	Surrogate Spike
	Percent Recovery
Tetrachlorometaxylene	74%
Dibutylchloredate	73%

IT Corporation/Fort Story  
Date: 02/11/93

**IT ANALYTICAL SERVICES  
PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q301097/099

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Cyanide Analysis

Client Sample ID: 519029-W001  
Sample Date: 01/21/93  
Analysis Date: 01/27/93

Client Sample ID	Lab Sample ID	Concentration mg/L
519029-W001	Q30109901	ND0.01
-	METHOD BLANK	ND0.01

IT Corporation/Fort Story  
Date: 02/11/93

**IT ANALYTICAL SERVICES  
PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q301097/099

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TCLP Lead Analysis

Client Sample ID: See below  
Sample Date: 01/21/93  
TCLP Extraction Date: 01/25/93  
Analysis Date: 01/27/93

Client Sample ID	Lab Sample ID	Concentration mg/L	Matrix Spike Percent Recovery
519029-S001	Q30109701	0.765	-
519029-S002	Q30109702	0.138	-
519029-S003	Q30109703	2.54	96%
-	TCLP PREPARATION BLANK	ND0.05	-
-	METHOD BLANK	ND0.05	-





INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

IT CORPORATION  
2790 MOSSIDE BLVD.  
MONROEVILLE, PA 15146-2792  
TOM MATHISON

Date: 04/23/93

Work Order: B3-04-192

This is the Certificate of Analysis for the following samples:

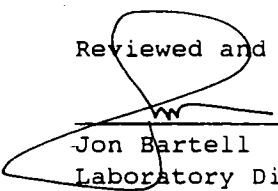
Client Work ID: FT. STORY 519029	519029
Date Received: 04/20/93	
Number of Samples: 4	
Sample Type: SOIL	

### I. Introduction

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
519029S01	B3-04-192-01
519029S02	B3-04-192-02
519029S03	B3-04-192-03
519029S04	B3-04-192-04

Reviewed and Approved:

  
\_\_\_\_\_  
Jon Bartell  
Laboratory Director

American Council of Independent Laboratories  
International Association of Environmental Testing Laboratories  
American Association for Laboratory Accreditation

Company: IT CORPORATION

Date: 04/23/93

Client Work ID: FT. STORY 519029

519029

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B3-04-192

---

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Company: IT CORPORATION

Date: 04/23/93

Client Work ID: FT. STORY 519029

519029

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-04-192

SAMPLE ID: 519029S01

SAMPLE DATE: 04/19/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH by GC (mod EPA 8015)	1	85	2	mg/kg	04/22/93	CALIFORNIA

Referenced notes for these results:

- 1 Concentration represents a diesel/JP-5 pattern as well as a pattern of late eluting hydrocarbons.

Company: IT CORPORATION

Date: 04/23/93

Client Work ID: FT. STORY 519029

519029

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-04-192

SAMPLE ID: 519029S02

SAMPLE DATE: 04/19/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH by GC (mod EPA 8015)	1	1300	35 mg/kg	04/22/93	CALIFORNIA

Referenced notes for these results:

- 1 Concentration represents a diesel/JP-5 pattern.

Company: IT CORPORATION

Date: 04/23/93

Client Work ID: FT. STORY 519029

519029

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B3-04-192

SAMPLE ID: 519029S03

SAMPLE DATE: 04/19/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH by GC (mod EPA 8015)		ND	2 mg/kg	04/22/93	CALIFORNIA

Company: IT CORPORATION

Date: 04/23/93

Client Work ID: FT. STORY 519029

519029

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B3-04-192

SAMPLE ID: 519029S04

SAMPLE DATE: 04/19/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH by GC (mod EPA 8015)	1	66	2 mg/kg	04/22/93	CALIFORNIA

Referenced notes for these results:

- 1 Concentration represents a small diesel/JP-5 pattern as well as a larger pattern of late eluting hydrocarbons.

Company: IT CORPORATION

Date: 04/23/93

Client Work ID: FT. STORY 519029

519029

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-04-192

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#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH by GC (mod EPA 8015) TEST CODE TPH\_GC

TPH-Extractable	EPA Methods 3510/3520/3550/3580 for extraction of
Petroleum	samples and modified EPA Method 8015 for GC/FID
Hydrocarbons	analysis of extracts run against a diesel standard.



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CORPORATION

ANALYSIS REQUEST AND  
CHAIN OF CUSTODY RECORD\*

Reference Document N 419107  
Page 1 of 1

Project Name/No. <sup>1</sup> FT. STORY 519029  
Sample Team Members <sup>2</sup> BOBERG  
Profit Center No. <sup>3</sup> 2254  
Project Manager <sup>4</sup> TOM MATHISON  
Purchase Order No. <sup>6</sup>  
Required Report Date <sup>11</sup> NORMAL

Samples Shipment Date <sup>7</sup> 04-19-93  
Lab Destination <sup>8</sup> ITAS AUSTIN, TX.  
Lab Contact <sup>9</sup> CARIA BUTLER  
Project Contact/Phone <sup>12</sup> TOM MATHISON  
Carrier/Waybill No. <sup>13</sup> FED EX 6075020194  
CJS 4/20/93

Bill to: <sup>5</sup> TOM MATHISON (412) 372-7701  
IT CORP  
2790 MOSSIDE BLVD  
MONROEVILLE, PA, 15146  
Report to: <sup>10</sup> TOM MATHISON  
IT CORP  
2790 MOSSIDE BLVD  
MONROEVILLE, PA, 15146

ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
519029S01	SOIL (SAND)	4-19-93 0810	AMBER GLASS	1-250ML	NONE	TPH BY <sup>NETHED</sup> 418.1+METALS	GOOD COND.	
519029S02		0820					TEMP 4°C	
519029S03		0830					CJS 4/20/93	
519029S04		0840						

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by <sup>28</sup>  
(Signature/Affiliation)

Jack Boberg IT Corp

Date: 04-19-93  
Time: 1100

1. Received by <sup>28</sup>  
(Signature/Affiliation)

Chris Schryver IT

Date: 4/20/93  
Time: 0933

2. Relinquished by  
(Signature/Affiliation)

Date:  
Time:

2. Received by  
(Signature/Affiliation)

Date:  
Time:

3. Relinquished by  
(Signature/Affiliation)

Date:  
Time:

3. Received by  
(Signature/Affiliation)

Date:  
Time:

Comments: <sup>29</sup>

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions



CERTIFICATE OF ANALYSIS

---

IT Corporation/Fort Story  
2790 Mosside Boulevard  
Monroeville, PA 15146  
Attn: Tom Mathison

May 6, 1993

---

Job Number: Q304166/167

The Certificate of Analysis is for the following:

Client Project ID:	519029
Date Received by Lab:	04/20/93
Number of Samples:	Four
Sample Type:	Soil

---

1.0 Introduction

On April 20, 1993, four soil samples were received at ITAS Pittsburgh, labeled as follows:

519029S01	519029S02	519029S03	519029S04
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2.0 Analytical Results/Methodology

Results are presented in the enclosed tables and were determined in accordance with Method 418.1, Methods for the Chemical Analysis of Water and Waste, EPA, 600/4-79-020, 1983 revision; Methods 3050, 6010, 7060, 7471, 7740, 8240, and 8270, referenced in Test Methods for Evaluating Solid Waste, EPA SW-846, 3rd ed., 1986; Environmental Protection Agency, Contract Laboratory Program, Statement of Work No. 7/88, Section IV, Exhibit-D, Part F, July 1988.

Results of the sample concentrations are based on dry weight and expressed in milligrams per kilogram or parts per million and micrograms per kilogram or parts per billion. ND denotes that the compound is not detected at or above the indicated detection limit.

Reviewed and Approved:



Carrie L. Smith, Project Manager

## 2.0 Analytical Results/Methodology (Continued)

### Volatiles

Sample 519029S02 has surrogates toluene-d<sub>8</sub> and bromofluorobenzene outside the advisory QC limits on the initial analysis; and also, a xylene hit over calibration. A medium level analysis was performed to get xylene within calibration; the surrogates for this analysis were all within the advisory QC limits. Both sets of results have been reported.

### Total Petroleum Hydrocarbons

Sample 519029S04 was analyzed in triplicate for 418.1 due to the variation in the first two analyses.

## 3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

## Volatile Organic Compounds

Client Sample ID: 519029S01  
 Sample Date: 04/19/93  
 Lab Sample ID: Q30416701  
 Analysis Date: 04/30/93

Compound	Concentration $\mu\text{g/Kg}$	Compound	Concentration $\mu\text{g/Kg}$
Chloromethane	ND10	1,2-Dichloropropane	ND5
Bromomethane	ND10	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND10	Trichloroethene	ND5
Chloroethane	ND10	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND100	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	2-Chloroethylvinylether	ND10
1,1-Dichloroethane	ND5	Bromoform	ND5
1,2-Dichloroethene (total)	ND5	4-Methyl-2-pentanone	ND50
Chloroform	ND5	2-Hexanone	ND50
1,2-Dichloroethane	ND5	Tetrachloroethene	ND5
2-Butanone	ND100	1,1,2,2-Tetrachloroethane	ND5
1,1,1-Trichloroethane	ND5	Toluene	ND5
Carbon tetrachloride	ND5	Chlorobenzene	ND5
Vinyl acetate	ND50	Ethylbenzene	ND5
Bromodichloromethane	ND5	Styrene	ND5
		Xylenes (total)	ND5

Surrogate Spike  
Percent Recovery

## Method Blank 1

Toluene-d <sub>8</sub>	99%
Bromofluorobenzene	100%
1,2-Dichloroethane-d <sub>4</sub>	86%

## Volatile Organic Compounds

Client Sample ID: 519029S02

Sample Date: 04/19/93

Lab Sample ID: Q30416702

Analysis Date: 05/03/93

Compound	Concentration $\mu\text{g/Kg}$	Compound	Concentration $\mu\text{g/Kg}$
Chloromethane	ND41	1,2-Dichloropropane	ND20
Bromomethane	ND41	cis-1,3-Dichloropropene	ND20
Vinyl chloride	ND41	Trichloroethene	ND20
Chloroethane	ND41	Dibromochloromethane	ND20
Methylene chloride	ND20	1,1,2-Trichloroethane	ND20
Acetone	ND410	Benzene	ND20
Carbon disulfide	ND20	trans-1,3-Dichloropropene	ND20
1,1-Dichloroethene	ND20	2-Chloroethylvinylether	ND41
1,1-Dichloroethane	ND20	Bromoform	ND20
1,2-Dichloroethene (total)	ND20	4-Methyl-2-pentanone	ND200
Chloroform	ND20	2-Hexanone	ND200
1,2-Dichloroethane	ND20	Tetrachloroethene	ND20
2-Butanone	ND410	1,1,2,2-Tetrachloroethane	ND20
1,1,1-Trichloroethane	ND20	Toluene	ND20
Carbon tetrachloride	ND20	Chlorobenzene	ND20
Vinyl acetate	ND200	Ethylbenzene	ND20
Bromodichloromethane	ND20	Styrene	ND20
		Xylenes (total)	2900**

Surrogate Spike  
Percent Recovery

## Method Blank 2

Toluene-d <sub>8</sub>	73%	*
Bromofluorobenzene	384%	*
1,2-Dichloroethane-d <sub>4</sub>	108%	

\* Outside QC limits.

\*\* Above calibration.

## Volatile Organic Compounds

Client Sample ID: 519029S02 Dilution

Sample Date: 04/19/93

Lab Sample ID: Q30416702

Analysis Date: 05/04/93

Compound	Concentration $\mu\text{g/Kg}$	Compound	Concentration $\mu\text{g/Kg}$
Chloromethane	ND1300	1,2-Dichloropropane	ND660
Bromomethane	ND1300	cis-1,3-Dichloropropene	ND660
Vinyl chloride	ND1300	Trichloroethene	ND660
Chloroethane	ND1300	Dibromochloromethane	ND660
Methylene chloride	ND660	1,1,2-Trichloroethane	ND660
Acetone	ND13000	Benzene	ND660
Carbon disulfide	ND660	trans-1,3-Dichloropropene	ND660
1,1-Dichloroethene	ND660	2-Chloroethylvinylether	ND1300
1,1-Dichloroethane	ND660	Bromoform	ND660
1,2-Dichloroethene (total)	ND660	4-Methyl-2-pentanone	ND6600
Chloroform	ND660	2-Hexanone	ND6600
1,2-Dichloroethane	ND660	Tetrachloroethene	ND660
2-Butanone	ND13000	1,1,2,2-Tetrachloroethane	ND660
1,1,1-Trichloroethane	ND660	Toluene	ND660
Carbon tetrachloride	ND660	Chlorobenzene	ND660
Vinyl acetate	ND6600	Ethylbenzene	ND660
Bromodichloromethane	ND660	Styrene	ND660
		Xylenes (total)	2600

Surrogate Spike  
Percent Recovery

## Method Blank 3

Toluene-d <sub>8</sub>	91%
Bromofluorobenzene	110%
1,2-Dichloroethane-d <sub>4</sub>	107%

## Volatile Organic Compounds

Client Sample ID: 519029S03  
 Sample Date: 04/19/93  
 Lab Sample ID: Q30416703  
 Analysis Date: 05/03/93

Compound	Concentration $\mu\text{g/Kg}$	Compound	Concentration $\mu\text{g/Kg}$
Chloromethane	ND11	1,2-Dichloropropane	ND6
Bromomethane	ND11	cis-1,3-Dichloropropene	ND6
Vinyl chloride	ND11	Trichloroethene	ND6
Chloroethane	ND11	Dibromochloromethane	ND6
Methylene chloride	ND6	1,1,2-Trichloroethane	ND6
Acetone	ND110	Benzene	ND6
Carbon disulfide	ND6	trans-1,3-Dichloropropene	ND6
1,1-Dichloroethene	ND6	2-Chloroethylvinylether	ND11
1,1-Dichloroethane	ND6	Bromoform	ND6
1,2-Dichloroethene (total)	ND6	4-Methyl-2-pentanone	ND56
Chloroform	ND6	2-Hexanone	ND56
1,2-Dichloroethane	ND6	Tetrachloroethene	ND6
2-Butanone	ND110	1,1,2,2-Tetrachloroethane	ND6
1,1,1-Trichloroethane	ND6	Toluene	ND6
Carbon tetrachloride	ND6	Chlorobenzene	ND6
Vinyl acetate	ND56	Ethylbenzene	ND6
Bromodichloromethane	ND6	Styrene	ND6
		Xylenes (total)	ND6

Surrogate Spike  
Percent Recovery

## Method Blank 2

Toluene-d <sub>8</sub>	83%
Bromofluorobenzene	89%
1,2-Dichloroethane-d <sub>4</sub>	93%

## Volatile Organic Compounds

Client Sample ID: 519029S04  
 Sample Date: 04/19/93  
 Lab Sample ID: Q30416704  
 Analysis Date: 05/03/93

Compound	Concentration $\mu\text{g/Kg}$	Compound	Concentration $\mu\text{g/Kg}$
Chloromethane	ND11	1,2-Dichloropropane	ND6
Bromomethane	ND11	cis-1,3-Dichloropropene	ND6
Vinyl chloride	ND11	Trichloroethene	ND6
Chloroethane	ND11	Dibromochloromethane	ND6
Methylene chloride	ND6	1,1,2-Trichloroethane	ND6
Acetone	ND110	Benzene	ND6
Carbon disulfide	ND6	trans-1,3-Dichloropropene	ND6
1,1-Dichloroethene	ND6	2-Chloroethylvinylether	ND11
1,1-Dichloroethane	ND6	Bromoform	ND6
1,2-Dichloroethene (total)	ND6	4-Methyl-2-pentanone	ND55
Chloroform	ND6	2-Hexanone	ND55
1,2-Dichloroethane	ND6	Tetrachloroethene	ND6
2-Butanone	ND110	1,1,2,2-Tetrachloroethane	ND6
1,1,1-Trichloroethane	ND6	Toluene	ND6
Carbon tetrachloride	ND6	Chlorobenzene	ND6
Vinyl acetate	ND55	Ethylbenzene	ND6
Bromodichloromethane	ND6	Styrene	ND6
		Xylenes (total)	ND6

Surrogate Spike  
Percent Recovery

## Method Blank 2

Toluene-d <sub>8</sub>	100%
Bromofluorobenzene	103%
1,2-Dichloroethane-d <sub>4</sub>	104%

## Volatile Organic Compounds

Lab Sample ID: Method Blank 1

Analysis Date: 04/30/93

Compound	Concentration $\mu\text{g/Kg}$	Compound	Concentration $\mu\text{g/Kg}$
Chloromethane	ND10	1,2-Dichloropropane	ND5
Bromomethane	ND10	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND10	Trichloroethene	ND5
Chloroethane	ND10	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND100	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	2-Chloroethylvinylether	ND10
1,1-Dichloroethane	ND5	Bromoform	ND5
1,2-Dichloroethene (total)	ND5	4-Methyl-2-pentanone	ND50
Chloroform	ND5	2-Hexanone	ND50
1,2-Dichloroethane	ND5	Tetrachloroethene	ND5
2-Butanone	ND100	1,1,2,2-Tetrachloroethane	ND5
1,1,1-Trichloroethane	ND5	Toluene	ND5
Carbon tetrachloride	ND5	Chlorobenzene	ND5
Vinyl acetate	ND50	Ethylbenzene	ND5
Bromodichloromethane	ND5	Styrene	ND5
		Xylenes (total)	ND5

Surrogate Spike  
Percent Recovery

Toluene-d <sub>8</sub>	101%
Bromofluorobenzene	100%
1,2-Dichloroethane-d <sub>4</sub>	114%



## Volatile Organic Compounds

Lab Sample ID: Method Blank 2

Analysis Date: 05/03/93

Compound	Concentration $\mu\text{g/Kg}$	Compound	Concentration $\mu\text{g/Kg}$
Chloromethane	ND10	1,2-Dichloropropane	ND5
Bromomethane	ND10	cis-1,3-Dichloropropene	ND5
Vinyl chloride	ND10	Trichloroethene	ND5
Chloroethane	ND10	Dibromochloromethane	ND5
Methylene chloride	ND5	1,1,2-Trichloroethane	ND5
Acetone	ND100	Benzene	ND5
Carbon disulfide	ND5	trans-1,3-Dichloropropene	ND5
1,1-Dichloroethene	ND5	2-Chloroethylvinylether	ND10
1,1-Dichloroethane	ND5	Bromoform	ND5
1,2-Dichloroethene (total)	ND5	4-Methyl-2-pentanone	ND50
Chloroform	ND5	2-Hexanone	ND50
1,2-Dichloroethane	ND5	Tetrachloroethene	ND5
2-Butanone	ND100	1,1,2,2-Tetrachloroethane	ND5
1,1,1-Trichloroethane	ND5	Toluene	ND5
Carbon tetrachloride	ND5	Chlorobenzene	ND5
Vinyl acetate	ND50	Ethylbenzene	ND5
Bromodichloromethane	ND5	Styrene	ND5
		Xylenes (total)	ND5

Surrogate Spike  
Percent Recovery

Toluene-d <sub>8</sub>	98%
Bromofluorobenzene	96%
1,2-Dichloroethane-d <sub>4</sub>	105%

## Volatile Organic Compounds

Lab Sample ID: Method Blank 3

Analysis Date: 05/04/93

Compound	Concentration $\mu\text{g/Kg}$	Compound	Concentration $\mu\text{g/Kg}$
Chloromethane	ND1200	1,2-Dichloropropane	ND620
Bromomethane	ND1200	cis-1,3-Dichloropropene	ND620
Vinyl chloride	ND1200	Trichloroethene	ND620
Chloroethane	ND1200	Dibromochloromethane	ND620
Methylene chloride	ND620	1,1,2-Trichloroethane	ND620
Acetone	ND12000	Benzene	ND620
Carbon disulfide	ND620	trans-1,3-Dichloropropene	ND620
1,1-Dichloroethene	ND620	2-Chloroethylvinylether	ND1200
1,1-Dichloroethane	ND620	Bromoform	ND620
1,2-Dichloroethene (total)	ND620	4-Methyl-2-pentanone	ND6200
Chloroform	ND620	2-Hexanone	ND6200
1,2-Dichloroethane	ND620	Tetrachloroethene	ND620
2-Butanone	ND12000	1,1,2,2-Tetrachloroethane	ND620
1,1,1-Trichloroethane	ND620	Toluene	ND620
Carbon tetrachloride	ND620	Chlorobenzene	ND620
Vinyl acetate	ND6200	Ethylbenzene	ND620
Bromodichloromethane	ND620	Styrene	ND620
		Xylenes (total)	ND620

Surrogate Spike  
Percent Recovery

Toluene-d <sub>8</sub>	100%
Bromofluorobenzene	98%
1,2-Dichloroethane-d <sub>4</sub>	108%

## Semivolatile Organic Compounds

Client Sample ID: 519029S01  
 Sample Date: 04/19/93  
 Lab Sample ID: Q30416701  
 Extraction Date: 04/21/93  
 Analysis Date: 04/26/93

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Phenol	ND690	3-Nitroaniline	ND3400
bis(2-Chloroethyl)ether	ND690	Acenaphthene	ND690
2-Chlorophenol	ND690	2,4-Dinitrophenol	ND3400
1,3-Dichlorobenzene	ND690	4-Nitrophenol	ND3400
1,4-Dichlorobenzene	ND690	Dibenzofuran	ND690
Benzyl alcohol	ND1400	2,4-Dinitrotoluene	ND690
1,2-Dichlorobenzene	ND690	Diethylphthalate	ND690
2-Methylphenol	ND690	4-Chlorophenyl-phenylether	ND690
bis(2-Chloroisopropyl)ether	ND690	Fluorene	ND690
4-Methylphenol	ND690	4-Nitroaniline	ND3400
N-Nitroso-di-n-propylamine	ND690	4,6-Dinitro-2-methylphenol	ND3400
Hexachloroethane	ND690	N-Nitrosodiphenylamine	ND690
Nitrobenzene	ND690	4-Bromophenyl-phenylether	ND690
Isophorone	ND690	Hexachlorobenzene	ND690
2-Nitrophenol	ND690	Pentachlorophenol	ND3400
2,4-Dimethylphenol	ND690	Phenanthrene	ND690
Benzoic acid	ND3400	Anthracene	ND690
bis(2-Chloroethoxy)methane	ND690	Di-n-butylphthalate	ND690
2,4-Dichlorophenol	ND690	Fluoranthene	ND690
1,2,4-Trichlorobenzene	ND690	Pyrene	ND690
Naphthalene	ND690	Butylbenzylphthalate	ND690
4-Chloroaniline	ND1400	3,3'-Dichlorobenzidine	ND1400
Hexachlorobutadiene	ND690	Benzo(a)anthracene	ND690
4-Chloro-3-methylphenol	ND1400	Chrysene	ND690
2-Methylnaphthalene	ND690	bis(2-Ethylhexyl)phthalate	ND690
Hexachlorocyclopentadiene	ND690	Di-n-octylphthalate	ND690
2,4,6-Trichlorophenol	ND690	Benzo(b)fluoranthene	ND690
2,4,5-Trichlorophenol	ND690	Benzo(k)fluoranthene	ND690
2-Chloronaphthalene	ND690	Benzo(a)pyrene	ND690
2-Nitroaniline	ND3400	Indeno(1,2,3-cd)pyrene	ND690
Dimethylphthalate	ND690	Dibenzo(a,h)anthracene	ND690
Acenaphthylene	ND690	Benzo(g,h,i)perylene	ND690
2,6-Dinitrotoluene	ND690		
Surrogate Spike Percent Recovery:			
Nitrobenzene-d <sub>5</sub>	84%	Phenol-d <sub>6</sub>	77%
2-Fluorobiphenyl	80%	2-Fluorophenol	80%
Terphenyl	80%	2,4,6-Tribromophenol	79%

## Semivolatile Organic Compounds

Client Sample ID: 519029S02  
 Sample Date: 04/19/93  
 Lab Sample ID: Q30416702  
 Extraction Date: 04/21/93  
 Analysis Date: 04/26/93

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Phenol	ND690	3-Nitroaniline	ND850
bis(2-Chloroethyl)ether	ND690	Acenaphthene	ND690
2-Chlorophenol	ND690	2,4-Dinitrophenol	ND850
1,3-Dichlorobenzene	ND690	4-Nitrophenol	ND850
1,4-Dichlorobenzene	ND690	Dibenzofuran	ND690
Benzyl alcohol	ND140	2,4-Dinitrotoluene	ND690
1,2-Dichlorobenzene	ND690	Diethylphthalate	ND690
2-Methylphenol	ND690	4-Chlorophenyl-phenylether	ND690
bis(2-Chloroisopropyl)ether	ND690	Fluorene	1200
4-Methylphenol	ND690	4-Nitroaniline	ND850
N-Nitroso-di-n-propylamine	ND690	4,6-Dinitro-2-methylphenol	ND850
Hexachloroethane	ND690	N-Nitrosodiphenylamine	ND690
Nitrobenzene	ND690	4-Bromophenyl-phenylether	ND690
Isophorone	ND690	Hexachlorobenzene	ND690
2-Nitrophenol	ND690	Pentachlorophenol	ND850
2,4-Dimethylphenol	ND690	Phenanthrene	2300
Benzoic acid	ND850	Anthracene	2300
bis(2-Chloroethoxy)methane	ND690	Di-n-butylphthalate	ND690
2,4-Dichlorophenol	ND690	Fluoranthene	ND690
1,2,4-Trichlorobenzene	ND690	Pyrene	ND690
Naphthalene	1600	Butylbenzylphthalate	ND690
4-Chloroaniline	ND140	3,3'-Dichlorobenzidine	ND140
Hexachlorobutadiene	ND690	Benzo(a)anthracene	ND690
4-Chloro-3-methylphenol	ND140	Chrysene	ND690
2-Methylnaphthalene	5700	bis(2-Ethylhexyl)phthalate	ND690
Hexachlorocyclopentadiene	ND690	Di-n-octylphthalate	ND690
2,4,6-Trichlorophenol	ND690	Benzo(b)fluoranthene	ND690
2,4,5-Trichlorophenol	ND690	Benzo(k)fluoranthene	ND690
2-Chloronaphthalene	ND690	Benzo(a)pyrene	ND690
2-Nitroaniline	ND850	Indeno(1,2,3-cd)pyrene	ND690
Dimethylphthalate	ND690	Dibenzo(a,h)anthracene	ND690
Acenaphthylene	ND690	Benzo(g,h,i)perylene	ND690
2,6-Dinitrotoluene	ND690		
Surrogate Spike Percent Recovery:			
Nitrobenzene-d <sub>5</sub>	87%	Phenol-d <sub>6</sub>	76%
2-Fluorobiphenyl	80%	2-Fluorophenol	78%
Terphenyl	81%	2,4,6-Tribromophenol	78%

## Semivolatile Organic Compounds

Client Sample ID: 519029S03  
 Sample Date: 04/19/93  
 Lab Sample ID: Q30416703  
 Extraction Date: 04/21/93  
 Analysis Date: 04/27/93

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Phenol	ND690	3-Nitroaniline	ND350
bis(2-Chloroethyl)ether	ND690	Acenaphthene	ND690
2-Chlorophenol	ND690	2,4-Dinitrophenol	ND350
1,3-Dichlorobenzene	ND690	4-Nitrophenol	ND350
1,4-Dichlorobenzene	ND690	Dibenzofuran	ND690
Benzyl alcohol	ND140	2,4-Dinitrotoluene	ND690
1,2-Dichlorobenzene	ND690	Diethylphthalate	ND690
2-Methylphenol	ND690	4-Chlorophenyl-phenylether	ND690
bis(2-Chloroisopropyl)ether	ND690	Fluorene	ND690
4-Methylphenol	ND690	4-Nitroaniline	ND350
N-Nitroso-di-n-propylamine	ND690	4,6-Dinitro-2-methylphenol	ND350
Hexachloroethane	ND690	N-Nitrosodiphenylamine	ND690
Nitrobenzene	ND690	4-Bromophenyl-phenylether	ND690
Isophorone	ND690	Hexachlorobenzene	ND690
2-Nitrophenol	ND690	Pentachlorophenol	ND350
2,4-Dimethylphenol	ND690	Phenanthrene	ND690
Benzoic acid	ND350	Anthracene	ND690
bis(2-Chloroethoxy)methane	ND690	Di-n-butylphthalate	ND690
2,4-Dichlorophenol	ND690	Fluoranthene	ND690
1,2,4-Trichlorobenzene	ND690	Pyrene	ND690
Naphthalene	ND690	Butylbenzylphthalate	ND690
4-Chloroaniline	ND140	3,3'-Dichlorobenzidine	ND140
Hexachlorobutadiene	ND690	Benzo(a)anthracene	ND690
4-Chloro-3-methylphenol	ND140	Chrysene	ND690
2-Methylnaphthalene	ND690	bis(2-Ethylhexyl)phthalate	ND690
Hexachlorocyclopentadiene	ND690	Di-n-octylphthalate	ND690
2,4,6-Trichlorophenol	ND690	Benzo(b)fluoranthene	ND690
2,4,5-Trichlorophenol	ND690	Benzo(k)fluoranthene	ND690
2-Chloronaphthalene	ND690	Benzo(a)pyrene	ND690
2-Nitroaniline	ND350	Indeno(1,2,3-cd)pyrene	ND690
Dimethylphthalate	ND690	Dibenzo(a,h)anthracene	ND690
Acenaphthylene	ND690	Benzo(g,h,i)perylene	ND690
2,6-Dinitrotoluene	ND690		
Surrogate Spike Percent Recovery:			
Nitrobenzene-d <sub>5</sub>	79%	Phenol-d <sub>6</sub>	74%
2-Fluorobiphenyl	76%	2-Fluorophenol	68%
Terphenyl	91%	2,4,6-Tribromophenol	66%

## Semivolatile Organic Compounds

Client Sample ID: 519029S04  
 Sample Date: 04/19/93  
 Lab Sample ID: Q30416704  
 Extraction Date: 04/21/93  
 Analysis Date: 04/27/93

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Phenol	ND690	3-Nitroaniline	ND3400
bis(2-Chloroethyl)ether	ND690	Acenaphthene	ND690
2-Chlorophenol	ND690	2,4-Dinitrophenol	ND3400
1,3-Dichlorobenzene	ND690	4-Nitrophenol	ND3400
1,4-Dichlorobenzene	ND690	Dibenzofuran	ND690
Benzyl alcohol	ND1400	2,4-Dinitrotoluene	ND690
1,2-Dichlorobenzene	ND690	Diethylphthalate	ND690
2-Methylphenol	ND690	4-Chlorophenyl-phenylether	ND690
bis(2-Chloroisopropyl)ether	ND690	Fluorene	ND690
4-Methylphenol	ND690	4-Nitroaniline	ND3400
N-Nitroso-di-n-propylamine	ND690	4,6-Dinitro-2-methylphenol	ND3400
Hexachloroethane	ND690	N-Nitrosodiphenylamine	ND690
Nitrobenzene	ND690	4-Bromophenyl-phenylether	ND690
Isophorone	ND690	Hexachlorobenzene	ND690
2-Nitrophenol	ND690	Pentachlorophenol	ND3400
2,4-Dimethylphenol	ND690	Phenanthrene	ND690
Benzoic acid	ND3400	Anthracene	ND690
bis(2-Chloroethoxy)methane	ND690	Di-n-butylphthalate	ND690
2,4-Dichlorophenol	ND690	Fluoranthene	ND690
1,2,4-Trichlorobenzene	ND690	Pyrene	ND690
Naphthalene	ND690	Butylbenzylphthalate	ND690
4-Chloroaniline	ND1400	3,3'-Dichlorobenzidine	ND1400
Hexachlorobutadiene	ND690	Benzo(a)anthracene	ND690
4-Chloro-3-methylphenol	ND1400	Chrysene	ND690
2-Methylnaphthalene	ND690	bis(2-Ethylhexyl)phthalate	ND690
Hexachlorocyclopentadiene	ND690	Di-n-octylphthalate	ND690
2,4,6-Trichlorophenol	ND690	Benzo(b)fluoranthene	ND690
2,4,5-Trichlorophenol	ND690	Benzo(k)fluoranthene	ND690
2-Chloronaphthalene	ND690	Benzo(a)pyrene	ND690
2-Nitroaniline	ND3400	Indeno(1,2,3-cd)pyrene	ND690
Dimethylphthalate	ND690	Dibenzo(a,h)anthracene	ND690
Acenaphthylene	ND690	Benzo(g,h,i)perylene	ND690
2,6-Dinitrotoluene	ND690		
Surrogate Spike Percent Recovery:			
Nitrobenzene-d <sub>5</sub>	84%	Phenol-d <sub>6</sub>	80%
2-Fluorobiphenyl	81%	2-Fluorophenol	74%
Terphenyl	92%	2,4,6-Tribromophenol	73%

## Semivolatile Organic Compounds

Lab Sample ID: Method Blank

Extraction Date: 04/21/93

Analysis Date: 04/27/93

Compound	Concentration µg/Kg	Compound	Concentration µg/Kg
Phenol	ND660	3-Nitroaniline	ND300
bis(2-Chloroethyl)ether	ND660	Acenaphthene	ND660
2-Chlorophenol	ND660	2,4-Dinitrophenol	ND300
1,3-Dichlorobenzene	ND660	4-Nitrophenol	ND300
1,4-Dichlorobenzene	ND660	Dibenzofuran	ND660
Benzyl alcohol	ND100	2,4-Dinitrotoluene	ND660
1,2-Dichlorobenzene	ND660	Diethylphthalate	ND660
2-Methylphenol	ND660	4-Chlorophenyl-phenylether	ND660
bis(2-Chloroisopropyl)ether	ND660	Fluorene	ND660
4-Methylphenol	ND660	4-Nitroaniline	ND300
N-Nitroso-di-n-propylamine	ND660	4,6-Dinitro-2-methylphenol	ND300
Hexachloroethane	ND660	N-Nitrosodiphenylamine	ND660
Nitrobenzene	ND660	4-Bromophenyl-phenylether	ND660
Isophorone	ND660	Hexachlorobenzene	ND660
2-Nitrophenol	ND660	Pentachlorophenol	ND300
2,4-Dimethylphenol	ND660	Phenanthrene	ND660
Benzoic acid	ND300	Anthracene	ND660
bis(2-Chloroethoxy)methane	ND660	Di-n-butylphthalate	ND660
2,4-Dichlorophenol	ND660	Fluoranthene	ND660
1,2,4-Trichlorobenzene	ND660	Pyrene	ND660
Naphthalene	ND660	Butylbenzylphthalate	ND660
4-Chloroaniline	ND100	3,3'-Dichlorobenzidine	ND100
Hexachlorobutadiene	ND660	Benzo(a)anthracene	ND660
4-Chloro-3-methylphenol	ND100	Chrysene	ND660
2-Methylnaphthalene	ND660	bis(2-Ethylhexyl)phthalate	ND660
Hexachlorocyclopentadiene	ND660	Di-n-octylphthalate	ND660
2,4,6-Trichlorophenol	ND660	Benzo(b)fluoranthene	ND660
2,4,5-Trichlorophenol	ND660	Benzo(k)fluoranthene	ND660
2-Chloronaphthalene	ND660	Benzo(a)pyrene	ND660
2-Nitroaniline	ND300	Indeno(1,2,3-cd)pyrene	ND660
Dimethylphthalate	ND660	Dibenzo(a,h)anthracene	ND660
Acenaphthylene	ND660	Benzo(g,h,i)perylene	ND660
2,6-Dinitrotoluene	ND660		
Surrogate Spike Percent Recovery:			
Nitrobenzene-d <sub>5</sub>	91%	Phenol-d <sub>6</sub>	84%
2-Fluorobiphenyl	85%	2-Fluorophenol	82%
Terphenyl	98%	2,4,6-Tribromophenol	72%

## Total Metals Analysis

Client Sample ID: 519029S01  
Sample Date: 04/19/93  
Lab Sample ID: Q30416701  
Analysis Date: 04/29, 30/93  
Mercury: 04/20/93

Parameter	Concentration mg/Kg
Arsenic	ND1.0
Barium	7.7
Cadmium	ND0.52
Chromium	2.2
Lead	10.9
Mercury	ND0.09
Selenium	ND0.52
Silver	ND1.0

Client Sample ID: 519029S02  
Sample Date: 04/19/93  
Lab Sample ID: Q30416702  
Analysis Date: 04/29, 30/93  
Mercury: 04/20/93

Parameter	Concentration mg/Kg
Arsenic	ND1.0
Barium	5.6
Cadmium	ND0.51
Chromium	1.7
Lead	22.5
Mercury	ND0.09
Selenium	ND0.51
Silver	ND1.0



## Total Metals Analysis

Client Sample ID: 519029S03  
Sample Date: 04/19/93  
Lab Sample ID: Q30416703  
Analysis Date: 04/29, 30/93  
Mercury: 04/20/93

Parameter	Concentration mg/Kg
Arsenic	ND1.0
Barium	3.0
Cadmium	ND0.51
Chromium	1.2
Lead	ND5.1
Mercury	ND0.10
Selenium	ND0.51
Silver	ND1.0

Client Sample ID: 519029S04  
Sample Date: 04/19/93  
Lab Sample ID: Q30416704  
Analysis Date: 04/29, 30/93  
Mercury: 04/20/93

Parameter	Concentration mg/Kg
Arsenic	1.1
Barium	8.1
Cadmium	ND0.52
Chromium	2.9
Lead	30.0
Mercury	ND0.10
Selenium	ND0.52
Silver	ND1.0

IT Corporation/Fort Story

Date: 05/06/93

**IT ANALYTICAL SERVICES  
PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q304166/167

---

Total Metals Analysis

Lab Sample ID: Method Blank

Analysis Date: 04/29, 30/93

Mercury: 04/20/93

Parameter	Concentration mg/Kg
Arsenic	ND1.0
Barium	ND1.0
Cadmium	ND0.50
Chromium	ND1.0
Lead	ND5.0
Mercury	ND0.10
Selenium	ND0.50
Silver	ND1.0

IT Corporation/Fort Story

Date: 05/06/93

IT ANALYTICAL SERVICES  
PITTSBURGH, PA

Client Project ID: 519029

Job Number: Q304166/167

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### Total Petroleum Hydrocarbon Analysis

Client Sample ID: See Below

Sample Date: 04/19/93

Analysis Date: 04/21/93

Client Sample ID	Lab Sample ID	Concentration mg/Kg
519029S01	Q30416701	31
519029S02	Q30416702	4,000
519029S03	Q30416703	ND17
519029S04	Q30416703	210/72/71*
--	Method Blank	ND17

\*Sample was analyzed in triplicate.

CERTIFICATE OF ANALYSIS

IT Corporation/Fort Story  
2790 Mosside Boulevard  
Monroeville, PA 15146  
Attn: Tom Mathison

June 29, 1993

Job Number: Q304034/035 Revised

The Certificate of Analysis is for the following:

Client Project ID: 519029  
Date Received by Lab: 04/04/93  
Number of Samples: One  
Sample Type: Soil

1.0 Introduction

On April 4, 1993, one soil sample was received at ITAS Pittsburgh, labeled SPC-01.

Results were faxed to Tom Mathison on April 16, 1993.

2.0 Analytical Results/Methodology

Results are presented in the enclosed tables and were determined in accordance with Methods 3010, 3520, 3550, 6010, 7470, 8020, 8080, 8240, 8270, 9045, and 9095, Sections 7.1.2.2, 7.3.4.1, and 7.3.4.2, referenced in Test Methods for Evaluating Solid Waste, EPA SW-846, 3rd ed., 1986; Direct flame determination of ignitability; ITAS-Pittsburgh Methodology; Federal Register, Vol. 57, No. 227, Tuesday, November 24, 1992; Federal Register, Vol. 55, No. 126, Friday, June 29, 1990.

Results are based on sample concentration and expressed in milligrams per kilogram or parts per million and micrograms per liter or parts per billion. ND denotes that the compound is not detected at or above the indicated detection limit. Duplicate results indicate duplicate analysis.

Reviewed and Approved:

  
Carrie L. Smith, Project Manager

## 2.0 Analytical Results/Methodology (Continued)

### Volatile Organic Compounds

Sample SPC-01 was analyzed twice and confirmed matrix interference on the surrogates. Also, the methylene chloride results did not exhibit good reproducibility. Both analyses have been provided.

### TCLP Metals

The spike recoveries for mercury and silver on sample SPC-01 were not within the advisory QC limits.

## 3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

IT Corporation/Fort Story  
Date: 06/29/93

**IT ANALYTICAL SERVICES  
PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q304034/035 Revised

---

General Chemistry Analysis

Client Sample ID: SPC-01  
Sample Date: 04/03/93  
Lab Sample ID: Q30403401  
Analysis Date: 04/12, 13/93

Compound	Concentration mg/Kg
Reactive Cyanide*	ND250
Reactive Sulfide*	ND500

Lab Sample ID: Method Blank  
Analysis Date: 04/12, 13/93

Compound	Concentration mg/Kg
Reactive Cyanide*	ND250
Reactive Sulfide*	ND500

\* Results were determined by methodologies specified in SW-846, 3rd edition, 1986. These methods are prone to failure in both accuracy and reproducibility, therefore, we cannot assume any liability for these results. The reported detection limits are the EPA action levels for this analysis.

IT Corporation/Fort Story  
Date: 06/29/93

**IT ANALYTICAL SERVICES  
PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q304034/035 Revised

---

General Chemistry Analysis

Client Sample ID: SPC-01  
Sample Date: 04/03/93  
Lab Sample ID: Q30403401  
Analysis Date: 04/05/93

Parameter	Result
pH	5.90/5.91
Ignitability	> 140 °F Does not ignite, burn / > 140 °F Does not ignite, burn
Paint Filter Liquids Test	Passed, no free liquids / Passed, no free liquids

IT Corporation/Fort Story  
Date: 06/29/93

**IT ANALYTICAL SERVICES**  
**PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q304034/035 Revised

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TCLP Metals Analysis

Client Sample ID: SPC-01  
Sample Date: 04/03/93  
Lab Sample ID: Q30403501  
TCLP Extraction Date: 04/08/93  
Analysis Date: 04/14/93  
Mercury: 04/12/93

Parameter	Concentration mg/L	Matrix Spike Percent Recovery
Arsenic	ND0.1	100%
Barium	ND0.5	102%
Cadmium	0.006	94%
Chromium	ND0.05	91%
Lead	0.15	95%
Mercury	ND0.0002	64%*
Selenium	ND0.05	99%
Silver	ND0.01	44%*

\* Outside QC limits.



IT Corporation/Fort Story  
Date: 06/29/93

**IT ANALYTICAL SERVICES**  
**PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q304034/035 Revised

---

TCLP Metals Analysis

Lab Sample ID: TCLP Preparation Blank  
TCLP Extraction Date: 04/08/93  
Analysis Date: 04/14/93  
Mercury: 04/12/93

Parameter	Concentration mg/L
Arsenic	ND0.1
Barium	ND0.5
Cadmium	ND0.005
Chromium	ND0.05
Lead	ND0.05
Mercury	ND0.0002
Selenium	ND0.05
Silver	ND0.01

IT Corporation/Fort Story  
Date: 06/29/93

IT ANALYTICAL SERVICES  
PITTSBURGH, PA

Client Project ID: 519029

Job Number: Q304034/035 Revised

---

TCLP Metals Analysis

Lab Sample ID: Method Blank  
Analysis Date: 04/14/93  
Mercury: 04/12/93

Parameter	Concentration mg/L
Arsenic	ND0.1
Barium	ND0.5
Cadmium	ND0.005
Chromium	ND0.05
Lead	ND0.05
Mercury	ND0.0002
Selenium	ND0.05
Silver	ND0.01

Client Project ID: 519029

Job Number: Q304034/035 Revised

Volatile Organic Compounds

Client Sample ID: SPC-01  
Sample Date: 04/03/93  
Lab Sample ID: Q30403401  
Analysis Date: 04/08/93

Compound	Concentration $\mu\text{g/Kg}$
Methylene chloride	73
Acetone	ND100
Carbon disulfide	ND5
2-Butanone	ND100
1,1,1-Trichloroethane	ND5
Carbon tetrachloride	ND5
Trichloroethene	ND5
1,1,2-Trichloroethane	ND5
Benzene	ND5
4-Methyl-2-pentanone	ND51
Tetrachloroethene	ND5
Toluene	ND5
Chlorobenzene	ND5
Ethylbenzene	ND5
Xylenes (total)	ND5
1,1,2Trichloro-1,2,2 Trifluoromethane	ND5
Ethyl acetate	ND5
Trichlorofluoromethane	ND5
Diethyl ether	ND5

Surrogate Spike  
Percent Recovery

Toluene-d <sub>8</sub>	118%*
Bromofluorobenzene	67%*
1,2-Dichloroethane-d <sub>4</sub>	98%

\* Outside QC limits.

Client Project ID: 519029

Job Number: Q304034/035 Revised

Volatile Organic Compounds

Client Sample ID: SPC-01 Reanalysis  
Sample Date: 04/03/93  
Lab Sample ID: Q30403401  
Analysis Date: 04/08/93

Compound	Concentration $\mu\text{g/Kg}$
Methylene chloride	46
Acetone	ND100
Carbon disulfide	ND5
2-Butanone	ND100
1,1,1-Trichloroethane	ND5
Carbon tetrachloride	ND5
Trichloroethene	ND5
1,1,2-Trichloroethane	ND5
Benzene	ND5
4-Methyl-2-pentanone	ND51
Tetrachloroethene	ND5
Toluene	ND5
Chlorobenzene	ND5
Ethylbenzene	ND5
Xylenes (total)	ND5
1,1,2Trichloro-1,2,2 Trifluoromethane	ND5
Ethyl acetate	ND5
Trichlorofluoromethane	ND5
Diethyl ether	ND5

Surrogate Spike  
Percent Recovery

Toluene-d <sub>8</sub>	125%*
Bromofluorobenzene	70%*
1,2-Dichloroethane-d <sub>4</sub>	104%

\* Outside QC limits.

Client Project ID: 519029

Job Number: Q304034/035 Revised

Volatile Organic Compounds

Lab Sample ID: Method Blank  
Analysis Date: 04/08/93

Compound	Concentration $\mu\text{g/Kg}$
Methylene chloride	ND5
Acetone	ND100
Carbon disulfide	ND5
2-Butanone	ND100
1,1,1-Trichloroethane	ND5
Carbon tetrachloride	ND5
Trichloroethene	ND5
1,1,2-Trichloroethane	ND5
Benzene	ND5
4-Methyl-2-pentanone	ND50
Tetrachloroethene	ND5
Toluene	ND5
Chlorobenzene	ND5
Ethylbenzene	ND5
Xylenes (total)	ND5
1,1,2Trichloro-1,2,2 Trifluoromethane	ND5
Ethyl acetate	ND5
Trichlorofluoromethane	ND5
Diethyl ether	ND5

Surrogate Spike  
Percent Recovery

Toluene-d <sub>8</sub>	97%
Bromofluorobenzene	85%
1,2-Dichloroethane-d <sub>4</sub>	97%

TCLP Volatile Compounds

Client Sample ID: SPC-01  
Sample Date: 04/03/93  
Lab Sample ID: Q30403501  
TCLP Extraction Date: 04/08/93  
Analysis Date: 04/13/93

Parameter	Concentration mg/L	Matrix Spike Percent Recovery
Vinyl chloride	ND0.010	66%
1,1-Dichloroethene	ND0.005	94%
Chloroform	ND0.005	105%
1,2-Dichloroethane	ND0.005	105%
2-Butanone	ND0.010	161%
Carbon Tetrachloride	ND0.005	100%
Trichloroethene	ND0.005	102%
Benzene	ND0.005	100%
Tetrachloroethene	ND0.005	101%
Chlorobenzene	ND0.005	100%

Method Blank 2      Method Blank 2

	Surrogate Spike Percent Recovery	
Toluene-d <sub>8</sub>	102%	97%
Bromofluorobenzene	93%	88%
1,2-Dichloroethane-d <sub>4</sub>	100%	98%

Client Project ID: 519029

Job Number: Q304034/035 Revised

TCLP Volatile Compounds

Lab Sample ID: TCLP Preparation Blank  
TCLP Extraction Date: 04/08/93  
Analysis Date: 04/13/93

Parameter	Concentration mg/L
Vinyl chloride	ND0.010
1,1-Dichloroethene	ND0.005
Chloroform	ND0.005
1,2-Dichloroethane	ND0.005
2-Butanone	ND0.010
Carbon Tetrachloride	ND0.005
Trichloroethene	ND0.005
Benzene	ND0.005
Tetrachloroethene	ND0.005
Chlorobenzene	ND0.005

Method Blank 1	Surrogate Spike Percent Recovery
Toluene-d <sub>8</sub>	95%
Bromofluorobenzene	102%
1,2-Dichloroethane-d <sub>4</sub>	93%

Client Project ID: 519029

Job Number: Q304034/035 Revised

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TCLP Volatile Compounds

Lab Sample ID: Method Blank 1  
Analysis Date: 04/12/93

Parameter	Concentration mg/L
Vinyl chloride	ND0.010
1,1-Dichloroethene	ND0.005
Chloroform	ND0.005
1,2-Dichloroethane	ND0.005
2-Butanone	ND0.010
Carbon Tetrachloride	ND0.005
Trichloroethene	ND0.005
Benzene	ND0.005
Tetrachloroethene	ND0.005
Chlorobenzene	ND0.005

	Surrogate Spike Percent Recovery
Toluene-d <sub>8</sub>	101%
Bromofluorobenzene	111%
1,2-Dichloroethane-d <sub>4</sub>	100%



---

TCLP Volatile Compounds

Lab Sample ID: Method Blank 2  
Analysis Date: 04/13/93

Parameter	Concentration mg/L
Vinyl chloride	ND0.010
1,1-Dichloroethene	ND0.005
Chloroform	ND0.005
1,2-Dichloroethane	ND0.005
2-Butanone	ND0.010
Carbon Tetrachloride	ND0.005
Trichloroethene	ND0.005
Benzene	ND0.005
Tetrachloroethene	ND0.005
Chlorobenzene	ND0.005

	Surrogate Spike Percent Recovery
Toluene-d <sub>8</sub>	101%
Bromofluorobenzene	87%
1,2-Dichloroethane-d <sub>4</sub>	92%

Client Project ID: 519029

Job Number: Q304034/035 Revised

TCLP Semivolatile Compounds

Client Sample ID: SPC-01  
Sample Date: 04/03/93  
Lab Sample ID: Q30403501  
TCLP Extraction Date: 04/08/93  
Extraction Date: 04/12/93  
Analysis Date: 04/15/93

Parameter	Concentration mg/L	Matrix Spike Percent Recovery
1,4-Dichlorobenzene	ND0.050	48%
Hexachloroethane	ND0.050	46%
Nitrobenzene	ND0.050	54%
Hexachlorobutadiene	ND0.050	57%
2,4,6-Trichlorophenol	ND0.050	63%
2,4,5-Trichlorophenol	ND0.250	64%
2,4-Dinitrotoluene	ND0.050	69%
Hexachlorobenzene	ND0.050	74%
Pentachlorophenol	ND0.250	89%
Total Methylphenol	ND0.050	58%
Pyridine	ND0.250	44%

	Surrogate Spike Percent Recovery	
Nitrobenzene-d <sub>5</sub>	77%	52%
2-Fluorobiphenyl	82%	57%
Terphenyl	81%	65%
Phenol-d <sub>5</sub>	74%	48%
2-Fluorophenol	68%	41%
2,4,6-Tribromophenol	75%	68%

Client Project ID: 519029

Job Number: Q304034/035 Revised

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TCLP Semivolatile Compounds

Lab Sample ID: TCLP Preparation Blank  
TCLP Extraction Date: 04/08/93  
Extraction Date: 04/12/93  
Analysis Date: 04/15/93

Parameter	Concentration mg/L
1,4-Dichlorobenzene	ND0.050
Hexachloroethane	ND0.050
Nitrobenzene	ND0.050
Hexachlorobutadiene	ND0.050
2,4,6-Trichlorophenol	ND0.050
2,4,5-Trichlorophenol	ND0.250
2,4-Dinitrotoluene	ND0.050
Hexachlorobenzene	ND0.050
Pentachlorophenol	ND0.250
Total Methylphenol	ND0.050
Pyridine	ND0.250

	Surrogate Spike Percent Recovery
Nitrobenzene-d <sub>5</sub>	74%
2-Fluorobiphenyl	81%
Terphenyl	78%
Phenol-d <sub>5</sub>	71%
2-Fluorophenol	69%
2,4,6-Tribromophenol	76%

Client Project ID: 519029

Job Number: Q304034/035 Revised

---

TCLP Semivolatile Compounds

Lab Sample ID: Method Blank  
Extraction Date: 04/12/93  
Analysis Date: 04/15/93

Parameter	Concentration mg/L
1,4-Dichlorobenzene	ND0.010
Hexachloroethane	ND0.010
Nitrobenzene	ND0.010
Hexachlorobutadiene	ND0.010
2,4,6-Trichlorophenol	ND0.010
2,4,5-Trichlorophenol	ND0.050
2,4-Dinitrotoluene	ND0.010
Hexachlorobenzene	ND0.010
Pentachlorophenol	ND0.050
Total Methylphenol	ND0.010
Pyridine	ND0.050

	Surrogate Spike Percent Recovery
Nitrobenzene-d <sub>5</sub>	73%
2-Fluorobiphenyl	70%
Terphenyl	78%
Phenol-d <sub>5</sub>	64%
2-Fluorophenol	61%
2,4,6-Tribromophenol	56%

IT Corporation/Fort Story  
Date: 06/29/93

IT ANALYTICAL SERVICES  
PITTSBURGH, PA

Client Project ID: 519029

Job Number: Q304034/035 Revised

---

Selected Volatile Organic Compounds

Client Sample ID: See below  
Sample Date: 04/03/93  
Analysis Date: 04/14/93

Client Sample ID	Lab Sample ID	Benzene	Toluene	Ethylbenzene	Total Xylenes
				Concentration µg/Kg	
SPC-01	Q30403401	ND2	18	ND2	ND2
--	Method Blank	ND2	ND2	ND2	ND2

Surrogate Spike Percent Recovery:

Client Sample ID	Lab Sample ID	Alpha, Alpha, Alpha-Trifluorotoluene
SPC-01	Q30403401	92%
--	Method Blank	88%

IT Corporation/Fort Story  
Date: 06/29/93

IT ANALYTICAL SERVICES  
PITTSBURGH, PA

Client Project ID: 519029

Job Number: Q304034/035 Revised

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Polychlorinated Biphenyls Analysis

Client Sample ID: SPC-01  
Sample Date: 04/03/93  
Lab Sample ID: Q30403401  
Extraction Date: 04/07/93  
Analysis Date: 04/15/93

Parameter	Concentration $\mu\text{g/Kg}$
Aroclor 1016	ND44
Aroclor 1221	ND44
Aroclor 1232	ND44
Aroclor 1242	ND44
Aroclor 1248	ND44
Aroclor 1254	ND44
Aroclor 1260	ND44

	Surrogate Spike Percent Recovery
Dibutylchloroendate	75%
Tetrachlorometaxylene	62%

IT Corporation/Fort Story  
Date: 06/29/93

**IT ANALYTICAL SERVICES**  
**PITTSBURGH, PA**

Client Project ID: 519029

Job Number: Q304034/035 Revised

---

Polychlorinated Biphenyls Analysis

Lab Sample ID: Method Blank  
Extraction Date: 04/07/93  
Analysis Date: 04/15/93

Parameter	Concentration µg/Kg
Aroclor 1016	ND43
Aroclor 1221	ND43
Aroclor 1232	ND43
Aroclor 1242	ND43
Aroclor 1248	ND43
Aroclor 1254	ND43
Aroclor 1260	ND43

	Surrogate Spike Percent Recovery
Dibutylchloroendate	79%
Tetrachlorometaxylene	78%

**CERTIFICATE OF ANALYSIS**

IT CORPORATION  
2790 MOSSIDE BLVD.  
MONROEVILLE, PA 15146-2792  
TOM MATHISON

Date: 09/01/93

Work Order: B3-08-294

P.O. Number: 519029

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY  
Date Received: 08/24/93  
Number of Samples: 6  
Sample Type: SOIL


519029-000

**I. Introduction**

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
1-A-S 01 01	B3-08-294-01
3-F-S 124 02	B3-08-294-02
4-A-S 04 03	B3-08-294-03
8-D-12 203 04	B3-08-294-04
9-E-36 471 05	B3-08-294-05
11-B-24 284 06	B3-08-294-06

Reviewed and Approved:

  
Jon Bartell  
Laboratory Director



Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

519029-000

Work Order: B3-08-294

---

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-08-294

SAMPLE ID: 1-A-S 01 01

SAMPLE DATE: 08/23/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0	mg/L Gasoline	08/25/93	EPA8015_MOD
TPH-D by GC (Mod 8015)		45	7	mg/kg	08/27/93	EPA8015_MOD

Company: IT CORPORATION  
Date: 09/01/93  
Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

519029-000

Work Order: B3-08-294

SAMPLE ID: 3-F-S 124 02

SAMPLE DATE: 08/23/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0 mg/L Gasoline	08/25/93	EPA8015_MOD
TPH-D by GC (Mod 8015)		400	33 mg/kg	08/30/93	EPA8015_MOD

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-08-294

SAMPLE ID: 4-A-S 04 03

SAMPLE DATE: 08/23/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0 mg/L Gasoline	08/25/93	EPA8015_MOD
TPH-D by GC (Mod 8015)		120	7 mg/kg	08/27/93	EPA8015_MOD

Company: IT CORPORATION  
Date: 09/01/93  
Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

519029-000

Work Order: B3-08-294

SAMPLE ID: 8-D-12 203 04

SAMPLE DATE: 08/23/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0 mg/L Gasoline	08/25/93	EPA8015_MOD
TPH-D by GC (Mod 8015)		65	7 mg/kg	08/27/93	EPA8015_MOD

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

519029-000

Work Order: B3-08-294

SAMPLE ID: 9-E-36 471 05

SAMPLE DATE: 08/23/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0	mg/L Gasoline	08/25/93	EPA8015_MOD
TPH-D by GC (Mod 8015)		790	69	mg/kg	08/30/93	EPA8015_MOD

Company: IT CORPORATION

Date: 09/01/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-08-294

SAMPLE ID: 11-B-24 284 06

SAMPLE DATE: 08/23/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-G by GC (Mod 8015)			ND		5.0	mg/L Gasoline	08/25/93	EPA8015_MOD
TPH-D by GC (Mod 8015)			380		34	mg/kg	08/30/93	EPA8015_MOD

Company: IT CORPORATION  
Date: 09/01/93  
Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

519029-000

Work Order: B3-08-294

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Referenced notes for this work order:

B308294

TPH HIGH BOILERS WERE QUANTED AGAINST HAVOLINE SAE FORMULA 3  
30 W MOTOR OIL.



Company: IT CORPORATION  
Date: 09/01/93  
Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

519029-000

Work Order: B3-08-294

#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-G by GC (Mod 8015)

TEST CODE TPH\_G

TPH-Extractable  
Petroleum  
Hydrocarbons

Modified EPA Method 8015 by purge-and-trap GC  
with FID detection. Quantitation of sample  
components as gasoline.

TEST NAME TPH-D by GC (Mod 8015)

TEST CODE TPH\_GC

TPH-Extractable  
Petroleum  
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of  
samples and modified EPA Method 8015 for GC/FID  
analysis of extracts run against a diesel standard.

[illegible]



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

IT CORPORATION  
2790 MOSSIDE BLVD.  
MONROEVILLE, PA 15146-2792  
TOM MATHISON

Date: 08/06/93

Work Order: B3-07-293

P.O. Number: 519029

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY

519029-000

Date Received: 07/29/93

Number of Samples: 9

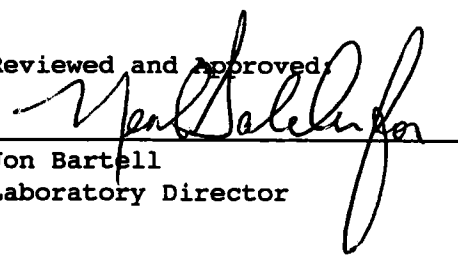
Sample Type: SOIL

### I. Introduction

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>		<u>LABORATORY #</u>
20-A-24	SOL# 01	B3-07-293-01
19-E-48	SOL# 02	B3-07-293-02
531-16-B-48	SOL# 03	B3-07-293-03
238-15-F-12	SOL# 04	B3-07-293-04
393-15-A-36	SOL# 05	B3-07-293-05
518-14-A-48	SOL# 06	B3-07-293-06
223 13-E-12	SOL# 07	B3-07-293-07
238	SOL# 08	B3-07-293-08
18-D-5	SOL# 09	B3-07-293-09

Reviewed and Approved:

  
Jon Bartell  
Laboratory Director

American Council of Independent Laboratories  
International Association of Environmental Testing Laboratories  
American Association for Laboratory Accreditation

Company: IT CORPORATION  
Date: 08/06/93  
Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B3-07-293

519029-000

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Company: IT CORPORATION  
Date: 08/06/93  
Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B3-07-293

519029-000

SAMPLE ID: 20-A-24 SOL# 01  
SAMPLE DATE: 07/21/93 08:05:00  
SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0	mg/kg Gasoline	08/01/93	EPA8015_MOD
TPH-D by GC (Mod 8015)	1	310	2	mg/kg	08/02/93	EPA8015_MOD

Referenced notes for these results:

- 1 The sample pattern is similar to a lubricating oil or grease. The pattern does not match diesel.

Company: IT CORPORATION  
Date: 08/06/93  
Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B3-07-293

519029-000

SAMPLE ID: 19-E-48 SOL# 02  
SAMPLE DATE: 07/21/93 08:37:00  
SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0 mg/kg Gasoline	08/01/93	EPA8015_MOD
TPH-D by GC (Mod 8015)		ND	2 mg/kg	08/02/93	EPA8015_MOD

Company: IT CORPORATION  
 Date: 08/06/93  
 Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
 AUSTIN, TX  
 (512) 892-6684  
 Work Order: B3-07-293

519029-000

SAMPLE ID: 531-16-B-48 SOL# 03  
 SAMPLE DATE: 07/27/93 09:45:00  
 SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0	mg/kg Gasoline	08/01/93	EPA8015_MOD
TPH-D by GC (Mod 8015)	1	780	9	mg/kg	08/02/93	EPA8015_MOD

Referenced notes for these results:

- 1 The sample pattern is similar to a lubricating oil or grease. The pattern does not match diesel.

Company: IT CORPORATION  
Date: 08/06/93  
Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B3-07-293

519029-000

SAMPLE ID: 238-15-F-12 SOL# 04  
SAMPLE DATE: 07/27/93 09:50:00  
SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0	mg/kg Gasoline	08/01/93	EPA8015_MOD
TPH-D by GC (Mod 8015)	1	240	2	mg/kg	08/02/93	EPA8015_MOD

Referenced notes for these results:

- 1 The sample pattern is similar to a lubricating oil or grease. The pattern does not match diesel.



Company: IT CORPORATION  
Date: 08/06/93  
Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
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Work Order: B3-07-293

519029-000

SAMPLE ID: 393-15-A-36 SOL# 05  
SAMPLE DATE: 07/27/93 10:04:00  
SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0	mg/kg Gasoline	08/01/93	EPA8015_MOD
TPH-D by GC (Mod 8015)	1	690	9	mg/kg	08/02/93	EPA8015_MOD

Referenced notes for these results:

- 1 The sample pattern is similar to a lubricating oil or grease. The pattern does not match diesel.

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-07-293

SAMPLE ID: 518-14-A-48 SOL# 06

SAMPLE DATE: 07/27/93 10:25:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0	mg/kg Gasoline	08/01/93	EPA8015_MOD
TPH-D by GC (Mod 8015)	1	750	9	mg/kg	08/02/93	EPA8015_MOD

Referenced notes for these results:

- 1 The sample pattern is similar to a lubricating oil or grease. The pattern does not match diesel.

Company: IT CORPORATION  
 Date: 08/06/93  
 Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
 AUSTIN, TX  
 (512) 892-6684  
 Work Order: B3-07-293

519029-000

SAMPLE ID: 223 13-E-12 SOL# 07  
 SAMPLE DATE: 07/27/93 10:37:00  
 SAMPLE MATRIX: SOIL

Test Name	Note Ref	Result	Reporting Limit	Units	Date Analyzed	Method Reference
TPH-G by GC (Mod 8015)		ND	5.0	mg/kg Gasoline	08/01/93	EPA8015_MOD
TPH-D by GC (Mod 8015)	1	170	2	mg/kg	08/02/93	EPA8015_MOD

**Referenced notes for these results:**

- 1 The sample pattern is similar to a lubricating oil or grease. The pattern does not match diesel. Sample results are based on wet weight basis; there was insufficient sample for dry weight analysis.

Company: IT CORPORATION  
Date: 08/06/93  
Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B3-07-293

519029-000

SAMPLE ID: 238 SOL# 08  
SAMPLE DATE: 07/27/93 09:50:00  
SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0 mg/kg Gasoline	08/01/93	EPA8015_MOD
TPH-D by GC (Mod 8015)	1	150	2 mg/kg	08/02/93	EPA8015_MOD

Referenced notes for these results:

- 1 The sample pattern is similar to a lubricating oil or grease. The pattern does not match diesel.

Company: IT CORPORATION  
Date: 08/06/93  
Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B3-07-293

519029-000

SAMPLE ID: 18-D-5      SOL# 09  
SAMPLE DATE: 07/27/93 11:26:00  
SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-G by GC (Mod 8015)		ND	5.0	mg/kg Gasoline	08/01/93	EPA8015_MOD
TPH-D by GC (Mod 8015)	1	150	2	mg/kg	08/02/93	EPA8015_MOD

Referenced notes for these results:

- 1 The sample pattern is similar to a lubricating oil or grease. The pattern does not match diesel.

Page: 12 of 13

Company: IT CORPORATION

Date: 08/06/93

Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

519029-000

Work Order: B3-07-293

---

Referenced notes for this work order:

B307293

SAMPLE ID'S FOR FRACTIONS -01A,B AND -02A,B WERE CHANGED  
FROM THAT LISTED ON THE COC AT CLIENT'S REQUEST.

Company: IT CORPORATION  
Date: 08/06/93  
Client Work ID: FT STORY

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B3-07-293

519029-000

#### IV. Methodology

Requested analyses were performed according to the following methods.

##### TEST NAME TPH-G by GC (Mod 8015)

TEST CODE TPH\_G

TPH-Extractable  
Petroleum  
Hydrocarbons

Modified EPA Method 8015 by purge-and-trap GC  
with FID detection. Quantitation of sample  
components as gasoline.

##### TEST NAME TPH-D by GC (Mod 8015)

TEST CODE TPH\_GC

TPH-Extractable  
Petroleum  
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of  
samples and modified EPA Method 8015 for GC/FID  
analysis of extracts run against a diesel standard.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

IT CORPORATION  
2790 MOSSIDE BLVD.  
MONROEVILLE, PA 15146-2792  
TOM MATHISON

Date: 10/25/93

Work Order: B3-10-167

P.O. Number: 519029

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY/KEROSENE

519029-000

Date Received: 10/14/93

Number of Samples: 21

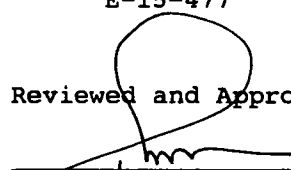
Sample Type: SAND/SOIL

### I. Introduction

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
E-16-352 ✓	B3-10-167-01
C-16-310 /	B3-10-167-02
C-14-308 /	B3-10-167-03
E-13-349 /	B3-10-167-04
D-12-325 /	B3-10-167-05
E-11-347 /	B3-10-167-06
C-10-304 /	B3-10-167-07
D-6-331	B3-10-167-08
C-5-229 /	B3-10-167-09
D-4-333 /	B3-10-167-10
E-15-477	B3-10-167-11

Reviewed and Approved:

  
Jon Bartell  
Laboratory Director

American Council of Independent Laboratories  
International Association of Environmental Testing Laboratories  
American Association for Laboratory Accreditation



Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

519029-000

Work Order: B3-10-167

Samples, continued from above:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
C-15-435	B3-10-167-12
D-14-449	B3-10-167-13
C-13-433	B3-10-167-14
E-12-474	B3-10-167-15
C-10-430	B3-10-167-16
E-7-469	B3-10-167-17
C-6-426	B3-10-167-18
E-4-466	B3-10-167-19
C-4-424	B3-10-167-20
F-15-490	B3-10-167-21

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-10-167

SAMPLE ID: E-16-352

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u>	<u>Result</u>	<u>Reporting</u>	<u>Date</u>	<u>Method</u>
	<u>Ref</u>		<u>Limit</u> <u>Units</u>	<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (Mod EPA8015)		300	7 mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

519029-000

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

SAMPLE ID: C-16-310

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		300	9 mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-10-167

SAMPLE ID: C-14-308

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u>	<u>Result</u>	<u>Reporting</u>	<u>Date</u>	<u>Method</u>
	<u>Ref</u>		<u>Limit</u> <u>Units</u>	<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (Mod EPA8015)		140	3 mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

519029-000

SAMPLE ID: E-13-349

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		80	2 mg/kg	10/19/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

519029-000

SAMPLE ID: D-12-325

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		100	2	mg/kg	10/19/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-10-167

SAMPLE ID: E-11-347

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		48	2	mg/kg	10/19/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

519029-000

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

SAMPLE ID: C-10-304

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		170	2	mg/kg	10/19/93	EPA8015_MOD



Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-10-167

SAMPLE ID: D-6-331

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		450	9	mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

519029-000

SAMPLE ID: C-5-229

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		420	17 mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

519029-000

SAMPLE ID: D-4-333

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		41	2	mg/kg	10/22/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

519029-000

SAMPLE ID: E-15-477

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		2900	90	mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-10-167

SAMPLE ID: C-15-435

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u>	<u>Result</u>	<u>Reporting</u>	<u>Date</u>	<u>Method</u>
	<u>Ref</u>		<u>Limit</u> <u>Units</u>	<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (Mod EPA8015)		270	9 mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-10-167

SAMPLE ID: D-14-449

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		3300	36	mg/kg	10/22/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

519029-000

SAMPLE ID: C-13-433

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		180	3	mg/kg	10/22/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

519029-000

SAMPLE ID: E-12-474

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		68	2	mg/kg	10/19/93	EPA8015_MOD



Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

519029-000

SAMPLE ID: C-10-430

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		360	18 mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-10-167

SAMPLE ID: E-7-469

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		620	13 mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-10-167

SAMPLE ID: C-6-426

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		290	13	mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-10-167

SAMPLE ID: E-4-466

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		500	17 mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-10-167

SAMPLE ID: C-4-424

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		210	9	mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

519029-000

SAMPLE ID: F-15-490

SAMPLE DATE: 10/13/93

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (Mod EPA8015)		130	2	mg/kg	10/21/93	EPA8015_MOD

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B3-10-167

519029-000

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Referenced notes for this work order:

B310167

ALL SAMPLES WERE QUANTED AGAINST A KEROSENE STANDARD. THE  
PATTERNS DID NOT APPEAR TO BE KEROSENE. THE PEAKS WERE  
LATE ELUTERS THAT COULD BE A MOTOR OIL.

Company: IT CORPORATION

Date: 10/25/93

Client Work ID: FT STORY/KEROSENE

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

519029-000

Work Order: B3-10-167

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#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (Mod EPA8015)      TEST CODE TPH\_GC

TPH-Extractable	EPA Methods 3510/3520/3550/3580 for extraction of
Petroleum	samples and modified EPA Method 8015 for GC/FID
Hydrocarbons	analysis of extracts run against a diesel standard.



**CERTIFICATE OF ANALYSIS**

IT Corporation/Fort Story  
2790 Mosside Boulevard  
Monroeville, PA 15146  
Attn: Tom Mathison

April 7, 1994

Job Number: Q403298/299

The Certificate of Analysis is for the following:

Client Project ID: 519029  
Date Received by Lab: 03/24/94  
Number of Samples: Thirty-three  
Sample Type: Soil

**1.0 Introduction**

On March 24, 1994 thirty-three samples were received at ITAS Pittsburgh, labeled as follows:

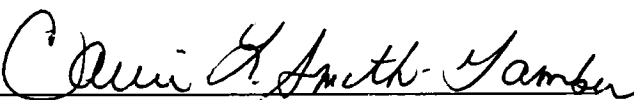
294B-032394	349E-032394	273A-032394
336D-032394	280B-032394	315C-032394
378F-032394	322D-032394	357E-032394
255A-032394	322D DUP-032394	332D-032394
297C-032394	364F-032394	374F-032394
339E-032394	275B-032394	260A-032394
290B-032394	270A-032394	302C-032394
290B DUP-032394	312C-032394	344E-032394
369F-032394	354E-032394	285B-032394
265A-032394	317D-032394	285B DUP-032394
307C-032394	359F-032394	327D-032394

**2.0 Analytical Results/Methodology**

The analysis for Methods 9071/418.1, and 8015-Diesel were performed at our ITAS Laboratory in Austin, Texas. These results will follow under separate cover.

Results are presented in the enclosed tables, and were determined in accordance with Method 8015, Test Methods for Evaluating Solid Waste, EPA SW-846, 3rd ed., 1986.

Reviewed and Approved:

  
Carrie L. Smith-Gamber, Project Manager

IT Corporation/Fort Story  
Date: 04/07/94  
Job Number: Q403298/299  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

---

## 2.0 Analytical Results/Methodology (Continued)

Results of sample concentrations are based on dry weight and expressed in milligrams per kilogram or parts per million. ND denotes that the compound is not detected at or above the indicated detection limit.

## 3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

IT Corporation/Fort Story  
Date: 04/07/94  
Job Number: Q403298/299  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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Total Petroleum Hydrocarbons - Gasoline Range Organics

Client Sample ID: See below  
Sample Date: 03/23/94  
Analysis Date: 03/27, 28, 29, 30/94

Client Sample ID	Lab Sample ID	Gasoline µg/Kg	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
294B-032394	Q40329801	ND6200	75%
336D-032394	Q40329802	ND6200	78%
378F-032394	Q40329803	ND6200	68%
255A-032394	Q40329804	ND6100	75%
297C-032394	Q40329805	ND6200	74%
339E-032394	Q40329806	ND6400	74%
290B-032394	Q40329807	ND6300	91%
290B DUP-032394	Q40329808	ND6100	89%
369F-032394	Q40329809	ND6200	88%
265A-032394	Q40329810	ND6400	89%
307C-032394	Q40329811	ND6500	90%
349E-032394	Q40329812	ND6300	82%
280B-032394	Q40329813	ND6500	88%
322D-032394	Q40329814	ND6700	87%
322D DUP-032394	Q40329815	ND6400	87%
364F-032394	Q40329816	ND6400	89%
275B-032394	Q40329901	ND6100	83%
270A-032394	Q40329902	ND6200	88%
312C-032394	Q40329903	ND6200	97%
354E-032394	Q40329904	ND7500	77%
317D-032394	Q40329905	ND7100	83%

IT Corporation/Fort Story  
Date: 04/07/94  
Job Number: Q403298/299  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

---

Total Petroleum Hydrocarbons - Gasoline Range Organics

Client Sample ID: See below  
Sample Date: 03/23/94  
Analysis Date: 03/27, 28, 29, 30/94

Client Sample ID	Lab Sample ID	Gasoline $\mu\text{g/Kg}$	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
359F-032394	Q40329906	ND6200	80%
273A-032394	Q40329907	ND6200	80%
315C-032394	Q40329908	ND6700	79%
357E-032394	Q40329909	ND6600	81%
332D-032394	Q40329910	ND6500	86%
374F-032394	Q40329911	ND6500	81%
260A-032394	Q40329912	ND6400	90%
302C-032394	Q40329913	ND6200	99%
344E-032394	Q40329914	ND6200	89%
285B-032394	Q40329915	ND6200	92%
285B DUP-032394	Q40329916	ND6400	89%
327D-032394	Q40329917	ND6400	81%
--	Method Blank 03/27/94	ND6200	74%
--	Method Blank 03/28/94	ND6200	82%
--	Method Blank 03/29/94	ND6200	82%
--	Method Blank 03/30/94	ND6200	82%

IT Corporation/Fort Story  
Date: 04/07/94  
Job Number: Q403298/299  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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Total Petroleum Hydrocarbons - Gasoline Range Organics

Client Sample ID: See below  
Sample Date: 03/23/94  
Analysis Date: 03/29/94

Client Sample ID	Lab Sample ID	Gasoline Percent Recovery	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
364F-032394 MS	Q40329818	66%	96%
364F-032394 MSD/DUP	Q40329817	70%	98%
327D-032394 MS	Q40329919	60%	90%
327D-032394 MSD/DUP	Q40329918	63%	99%

**CERTIFICATE OF ANALYSIS**

IT Corporation/Fort Story  
2790 Mosside Boulevard  
Monroeville, PA 15146

April 8, 1994

Attn: Tom Mathison

Job Number: Q403275/276 Revised

The Certificate of Analysis is for the following:

Client Project ID: 519029  
Date Received by Lab: 03/23/94  
Number of Samples: Thirty-two  
Sample Type: Soil

**1.0 Introduction**

On March 23, 1994, thirty-two soil samples were received at ITAS Pittsburgh, labeled as follows:

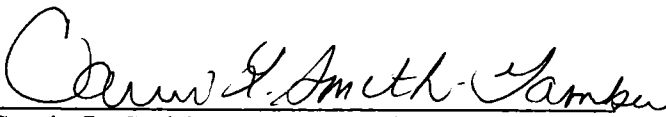
01A-032294	30B DUP-032294	64D-032294	94E-032294
05A-032294	35B-032294	67D-032294	99E-032294
10A-032294	40B-032294	72D-032294	104E-032294
15A-032294	43C-032294	77D-032294	106F-032294
20A-032294	47C-032294	82D-032294	109F-032294
22B-032294	52C-032294	82D DUP-032294	114F-032294
25B-032294	57C-032294	85E-032294	119F-032294
30B-032294	62C-032294	89E-032294	124F-032294

The analysis for TPH diesel is being performed at our ITAS laboratory in Austin, Texas. These results will follow under separate cover upon completion.

**2.0 Analytical Results/Methodology**

Results are presented in the enclosed tables and were determined in accordance with Methods 8015 and 9071, Test Methods for Evaluating Solid Waste, EPA SW-846, 3rd ed., 1986; Method 418.1, Method for the Chemical Analysis of Water and Waste, EPA, 600/4-79-020, 1983 revision.

Reviewed and Approved:

  
Carrie L. Smith-Gamber, Project Manager

IT Corporation/Fort Story  
Date: 04/08/94  
Job Number: Q403275/276 Revised  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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## 2.0 Analytical Results/Methodology (Continued)

Results are based on sample concentration and expressed in milligrams per kilogram or parts per million and micrograms per kilogram or parts per billion. ND denotes that the compound is not detected at or above the indicated detection limit.

### 8015 - Gasoline

All samples were analyzed using methanol dilutions which slightly elevated detection limits. However, this did not cause detection limits to be above the client action level.

## 3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

IT Corporation/Fort Story  
Date: 04/08/94  
Job Number: Q403275/276 Revised  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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Total Petroleum Hydrocarbons

Client Sample ID: See below  
Sample Date: 03/22/94  
Analysis Date: 03/26 and 28/94

Client Sample ID	Lab Sample ID	Concentration mg/Kg
01A-032294	Q40327510	700
05A-032294	Q40327601	120
10A-032294	Q40327615	120
15A-032294	Q40327603	180
20A-032294	Q40327501	520
22B-032294	Q40327505	120
25B-032294	Q40327503	97
30B-032294	Q40327609	190
30B DUP-032294	Q40327607	190
35B-032294	Q40327612	110
40B-032294	Q40327513	82
43C-032294	Q40327511	75
47C-032294	Q40327602	150
52C-032294	Q40327506	210
57C-032294	Q40327604	120
62C-032294	Q40327606	550
64D-032294	Q40327504	90
67D-032294	Q40327502	190
72D-032294	Q40327613	130
77D-032294	Q40327605	88
82D-032294	Q40327515	490
82D DUP-032294	Q40327516	380/420
85E-032294	Q40327512	360
89E-032294	Q40327611	370
94E-032294	Q40327610	360
99E-032294	Q40327614	150
104E-032294	Q40327508	310
106F-032294	Q40327507	340
109F-032294	Q40327509	160
114F-032294	Q40327608	230
119F-032294	Q40327616	2700*/4000*
124F-032294	Q40327514	480
--	Method Blank 03/26/94	ND17
--	Method Blank 03/28/94	ND17



IT Corporation/Fort Story  
Date: 04/08/94  
Job Number: Q403275/276 Revised  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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**Total Petroleum Hydrocarbons Matrix Spike Percent Recovery**

Client Sample ID: See below  
Sample Date: 03/22/94  
Analysis Date: 03/26 and 28/94

Client Sample ID	Lab Sample ID	Matrix Spike Percent Recovery
82D DUP-032294	Q40327516	117%
119F-032294	Q40327616	1400%*

\*Due to the level of petroleum hydrocarbons present in this sample, the sample, duplicate, and matrix spike all had to be diluted which resulted in the reported values.

IT Corporation/Fort Story  
Date: 04/08/94  
Job Number: Q403275/276 Revised  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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Total Petroleum Hydrocarbons Range Organics - Low Boilers

Client Sample ID: See below  
Sample Date: 03/22/94  
Analysis Date: 03/26, 27, 28/94

Client Sample ID	Lab Sample ID	Gasoline µg/Kg	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
01A-032294	Q40327510	ND7100	75%
05A-032294	Q40327601	ND6500	69%
10A-032294	Q40327615	ND6200	76%
15A-032294	Q40327603	ND6500	68%
20A-032294	Q40327501	ND6100	75%
22B-032294	Q40327505	ND6900	77%
25B-032294	Q40327503	5700	93%
30B-032294	Q40327609	ND6100	76%
30B DUP-032294	Q40327607	ND6500	69%
35B-032294	Q40327612	ND6200	76%
40B-032294	Q40327513	ND6600	73%
43C-032294	Q40327511	ND6700	73%
47C-032294	Q40327602	ND6500	69%
52C-032294	Q40327506	ND6400	83%
57C-032294	Q40327604	ND6000	68%
62C-032294	Q40327606	ND7400	68%
64D-032294	Q40327504	ND6200	77%
67D-032294	Q40327502	ND6200	80%
72D-032294	Q40327613	ND6200	76%
77D-032294	Q40327605	ND6500	69%
82D-032294	Q40327515	ND6400	72%
82D DUP-032294	Q40327516	ND6600	74%
85E-032294	Q40327512	ND6600	74%
89E-032294	Q40327611	ND6200	65%
94E-032294	Q40327610	ND6000	76%
99E-032294	Q40327614	ND6300	73%
104E-032294	Q40327508	ND6100	78%
106F-032294	Q40327507	ND6200	78%
109F-032294	Q40327509	ND6400	75%
114F-032294	Q40327608	ND6200	75%
119F-032294	Q40327616	ND6100	73%
124F-032294	Q40327514	ND6000	73%
--	Method Blank 03/26/94	ND6200	72%

IT Corporation/Fort Story  
Date: 04/08/94  
Job Number: Q403275/276 Revised  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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Total Petroleum Hydrocarbons - Low Boilers (Continued)

Client Sample ID: See below  
Sample Date: 03/22/94  
Analysis Date: 03/26, 27, 28/94

Client Sample ID	Lab Sample ID	Gasoline µg/Kg	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
--	Method Blank 03/27/94	ND6200	74%
--	Method Blank 03/28/94	ND6200	82%

IT Corporation/Fort Story  
Date: 04/08/94  
Job Number: Q403275/276 Revised  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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Total Petroleum Hydrocarbons Range Organics - Low Boilers

Client Sample ID: See below  
Sample Date: 03/22/94  
Analysis Date: 03/26, 27, 28/94

Client Sample ID	Gasoline Percentage Recovery	Surrogate Percent Recovery
20A-032294	68%/67%	101%/96%
119F-032294	67%/98%	101%/111%

**CERTIFICATE OF ANALYSIS**

IT Corporation/Fort Story  
2790 Mosside Boulevard  
Monroeville, PA 15146

April 5, 1994

Attn: Tom Mathison

Job Number: Q403275/276

The Certificate of Analysis is for the following:

Client Project ID: 519029  
Date Received by Lab: 03/23/94  
Number of Samples: Thirty-two  
Sample Type: Soil

**1.0 Introduction**

On March 23, 1994, thirty-two soil samples were received at ITAS Pittsburgh, labeled as follows:

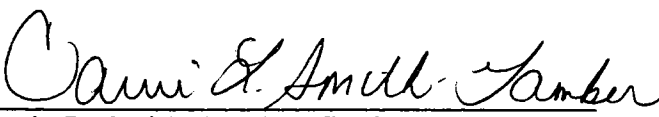
01A-032294	30B DUP-032294	64D-032294	94E-032294
05A-032294	35B-032294	67D-032294	99E-032294
10A-032294	40B-032294	72D-032294	104E-032294
15A-032294	43C-032294	77D-032294	106F-032294
20A-032294	47C-032294	82D-032294	109F-032294
22B-032294	52C-032294	82D DUP-032294	114F-032294
25B-032294	57C-032294	85E-032294	119F-032294
30B-032294	62C-032294	89E-032294	124F-032294

The analysis for TPH diesel is being performed at our ITAS laboratory in Austin, Texas. These results will follow under separate cover upon completion.

**2.0 Analytical Results/Methodology**

Results are presented in the enclosed tables and were determined in accordance with Methods 8015 and 9071, Test Methods for Evaluating Solid Waste, EPA SW-846, 3rd ed., 1986; Method 418.1, Method for the Chemical Analysis of Water and Waste, EPA, 600/4-79-020, 1983 revision.

Reviewed and Approved:

  
Carrie L. Smith-Gamber, Project Manager

IT Corporation/Fort Story  
Date: 04/05/94  
Job Number: Q403275/276  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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## 2.0 Analytical Results/Methodology (Continued)

Results are based on sample concentration and expressed in milligrams per kilogram or parts per million and micrograms per kilogram or parts per billion. ND denotes that the compound is not detected at or above the indicated detection limit.

### 8015 - Gasoline

All samples were analyzed using methanol dilutions which slightly elevated detection limits. However, this did not cause detection limits to be above the client action level.

## 3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

IT Corporation/Fort Story  
Date: 04/05/94  
Job Number: Q403275/276  
Client Project ID: 519029

IT ANALYTICAL SERVICES  
5103 OLD WILLIAM PENN HIGHWAY  
EXPORT, PA 15632  
(412) 731-8806

---

Total Petroleum Hydrocarbons

Client Sample ID: See below  
Sample Date: 03/22/94  
Analysis Date: 03/26 and 28/94

Client Sample ID	Lab Sample ID	Concentration mg/Kg
01A-032294	Q40327510	700
05A-032294	Q40327601	120
10A-032294	Q40327615	120
15A-032294	Q40327603	180
20A-032294	Q40327501	520
22B-032294	Q40327505	120
25B-032294	Q40327503	97
30B-032294	Q40327609	190
30B DUP-032294	Q40327607	190
35B-032294	Q40327612	110
40B-032294	Q40327513	82
43C-032294	Q40327511	75
47C-032294	Q40327602	150
52C-032294	Q40327506	210
57C-032294	Q40327604	120
62C-032294	Q40327606	550
64D-032294	Q40327504	90
67D-032294	Q40327502	190
72D-032294	Q40327613	130
77D-032294	Q40327605	88
82D-032294	Q40327515	490
82D DUP-032294	Q40327516	380/420
85E-032294	Q40327512	360
89E-032294	Q40327611	370
94E-032294	Q40327610	360
99E-032294	Q40327614	150
104E-032294	Q40327508	310
106F-032294	Q40327507	340
109F-032294	Q40327509	160
114F-032294	Q40327608	230
119F-032294	Q40327616	2700*/4000*
124F-032294	Q40327514	480
--	Method Blank 03/26/94	ND17
--	Method Blank 03/28/94	ND17

~~\*Due to the level of petroleum hydrocarbons present in this sample, the sample, duplicate, and matrix spike all had to be diluted which resulted in the reported values.~~

\* see next page

IT Corporation/Fort Story  
Date: 04/05/94  
Job Number: Q403275/276  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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Total Petroleum Hydrocarbons Matrix Spike Percent Recovery

Client Sample ID: See below  
Sample Date: 03/22/94  
Analysis Date: 03/26 and 28/94

Client Sample ID	Lab Sample ID	Matrix Spike Percent Recovery
82D DUP-032294	Q40327516	117%
119F-032294	Q40327616	1400%*

\*Due to the level of petroleum hydrocarbons present in this sample, the sample, duplicate, and matrix spike all had to be diluted which resulted in the reported values.



IT Corporation/Fort Story  
Date: 04/05/94  
Job Number: Q403275/276  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

---

Total Petroleum Hydrocarbons Range Organics - Low Boilers

Client Sample ID: See below  
Sample Date: 03/22/94  
Analysis Date: 03/26, 27, 28/94

Client Sample ID	Lab Sample ID	Gasoline $\mu\text{g/Kg}$	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
01A-032294	Q40327510	ND7100	75%
05A-032294	Q40327601	ND6500	69%
10A-032294	Q40327615	ND6200	76%
15A-032294	Q40327603	ND6500	68%
20A-032294	Q40327501	ND6100	75%
22B-032294	Q40327505	ND6900	77%
25B-032294	Q40327503	5700	93%
30B-032294	Q40327609	ND6100	76%
30B DUP-032294	Q40327607	ND6500	69%
35B-032294	Q40327612	ND6200	76%
40B-032294	Q40327513	ND6600	73%
43C-032294	Q40327511	ND6700	73%
47C-032294	Q40327602	ND6500	69%
52C-032294	Q40327506	ND6400	83%
57C-032294	Q40327604	ND6000	68%
62C-032294	Q40327606	ND7400	68%
64D-032294	Q40327504	ND6200	77%
67D-032294	Q40327502	ND6200	80%
72D-032294	Q40327613	ND6200	76%
77D-032294	Q40327605	ND6500	69%
82D-032294	Q40327515	ND6400	72%
82D DUP-032294	Q40327516	ND6600	74%
85E-032294	Q40327512	ND6600	74%
89E-032294	Q40327611	ND6200	65%
94E-032294	Q40327610	ND6000	76%
99E-032294	Q40327614	ND6300	73%
104E-032294	Q40327508	ND6100	78%
106F-032294	Q40327507	ND6200	78%
109F-032294	Q40327509	ND6400	75%
114F-032294	Q40327608	ND6200	75%
119F-032294	Q40327616	ND6100	73%

IT Corporation/Fort Story  
Date: 04/05/94  
Job Number: Q403275/276  
Client Project ID: 519029

IT ANALYTICAL SERVICES  
5103 OLD WILLIAM PENN HIGHWAY  
EXPORT, PA 15632  
(412) 731-8806

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Total Petroleum Hydrocarbons - Low Boilers (Continued)

Client Sample ID: See below  
Sample Date: 03/22/94  
Analysis Date: 03/26, 27, 28/94

Client Sample ID	Lab Sample ID	Gasoline $\mu\text{g/Kg}$	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
124F-032294	Q40327514	ND6000	73%
--	Method Blank 03/26/94	ND6200	72%
--	Method Blank 03/27/94	ND6200	74%
--	Method Blank 03/28/94	ND6200	82%

IT Corporation/Fort Story  
Date: 04/05/94  
Job Number: Q403275/276  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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Total Petroleum Hydrocarbons Range Organics - Low Boilers

Client Sample ID: See below  
Sample Date: 03/22/94  
Analysis Date: 03/26, 27, 28/94

Client Sample ID	Matrix Spike Percent Recovery
20A-032294	101%/96%
119F-032294	101%/111%

# Cooler Receipt Form

Project: FORT STORY

LIMS No. Q403275 / Q403276

Use other side of this form to note details concerning check-in problems.

## A. Preliminary Examination Phase:

Date cooler opened: 3/23/94

C-of-C No.: 453295/453294/417553/413603

By (print) Bob Finlay

(sign) Bob Finlay

1. Did cooler come with a shipping slip (air bill, etc.)? Yes No  
If YES, enter carrier name & air bill no. here: 9710126193
2. Were custody seals on outside of cooler? Yes No  
How many & where: 2 Left front Right rear  
Seal date: NA Seal name: \_\_\_\_\_
3. Were custody seals unbroken and intact at the date and time of arrival: Yes No
4. Did you screen samples for radioactivity using the Geiger Counter: Yes No
5. Were custody papers sealed in a plastic bag and taped inside of the lid? Yes No
6. Were custody papers filled out properly (ink, signed, etc.)? Yes No
7. Did you sign custody papers in the appropriate place? Yes No
8. Was project identifiable from custody papers? Yes No  
If YES, enter project name at the top of this form.
9. If required, was enough ice used? Yes No  
Type of ice: ICE CUBES
10. Have designated person initial here to acknowledge receipt of cooler: BF Date: 3/23/94

## B. Log-in Phase:

Date samples were logged-in: 3/23/94

By (print) Bob Finlay

(sign) Bob Finlay

11. Describe type of packing in cooler: Vermiculite / Styrofoam beads / Ice bags
12. Were all bottles sealed in separate plastic bags? Yes No
13. Did all bottles arrive unbroken & were labels in good condition? Yes No
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? Yes No
15. Did all bottle labels agree with custody papers? Yes No
16. Were correct containers used for the test indicated? Yes No
17. Were correct preservatives added to samples? NA Yes No
18. Was a sufficient amount of sample sent for tests indicated? Yes No
19. Were bubbles absent in volatile samples? Yes No  
If NO, list by sample number: NA
20. Was the project manager called and status discussed? Yes No  
If yes, give details on the back of this form.
21. Who was called? \_\_\_\_\_ By whom? \_\_\_\_\_ Date: \_\_\_\_\_

Hon Bunnardo called to make sure sample arrived O.K.

**CERTIFICATE OF ANALYSIS**

IT Corporation/Fort Story  
2790 Mosside Boulevard  
Monroeville, PA 15146  
Attn: Tom Mathison

April 8, 1994

Job Number: Q403321/322

The Certificate of Analysis is for the following:

Client Project ID: 519029  
Date Received by Lab: 03/25/94  
Number of Samples: Thirty-three  
Sample Type: Soil

1.0 Introduction

On March 25, 1994 thirty-three samples were received at ITAS Pittsburgh, labeled as follows:


450D-032494	455D DUP-032494	482E-032494
492F-032494	472E-032494	484F-032494
393A-032494	430C-032494	379A-032494
435C-032494	430C DUP-032494	421C-032494
440C-032494	408B-032494	418B-032494
477E-032494	400B-032494	383A-032494
477E DUP-032494	442D-032494	425C-032494
497F-032494	403B-032494	463E-032494
413B-032494	445D-032494	467E-032494
388A-032494	487F-032494	460D-032494
455D-032494	398A-032494	502F-032494

The analysis for TPH-diesel was performed at our ITAS laboratory in Austin, Texas. these results will follow under separate cover.

2.0 Analytical Results/Methodology

Results are presented in the enclosed tables, and were determined in accordance with Methods 8015 and 9071, Test Methods for Evaluating Solid Waste, EPA SW-846, 3rd ed., 1986; and Method 418.1, Method for the Chemical Analysis of Water and Waste, EPA, 600/4-79-020, 1983 revision.

Reviewed and Approved:

  
Carrie L. Smith-Gamber, Project Manager

IT Corporation/Fort Story  
Date: 04/08/94  
Job Number: Q403321/322  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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## 2.0 Analytical Results/Methodology (Continued)

Results of sample concentrations are based on dry weight and expressed in milligrams per kilogram or parts per million. ND denotes that the compound is not detected at or above the indicated detection limit.

## 3.0 Quality Control

QA/QC information can be found immediately following the analytical data.

IT Corporation/Fort Story  
Date: 04/08/94  
Job Number: Q403321/322  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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Total Petroleum Hydrocarbons Analysis

Client Sample ID: See below  
Sample Date: 03/24/94  
Analysis Date: 03/31/94

Client Sample ID	Lab Sample ID	Concentration mg/Kg
450D-032494	Q40332101	120
492F-032494	Q40332102	110
393A-032494	Q40332103	270
435C-032494	Q40332104	310
440C-032494	Q40332105	290
477E-032494	Q40332106	2,300
477E DUP-032494	Q40332107	3,200
497F-032494	Q40332108	270
413B-032494	Q40332109	45
388A-032494	Q40332110	2,000
455D-032494	Q40332111	3,500
455D DUP-032494	Q40332112	3,100
472E-032494	Q40332113	500
430C-032494	Q40332114	3,400
430C DUP-032494	Q40332115	2,500
408B-032494	Q40332116	270
408B-032494 DUP	Q40332117	270
400B-032494	Q40332201	210
442D-032494	Q40332202	580
403B-032494	Q40332203	220
445D-032494	Q40332204	110
487F-032494	Q40332205	490
398A-032494	Q40332206	170
482E-032494	Q40332207	57
484F-032494	Q40332208	26
379A-032494	Q40332209	850
421C-032494	Q40332210	810
418B-032494	Q40332211	560
383A-032494	Q40332212	130
425C-032494	Q40332213	330
463E-032494	Q40332214	310
467E-032494	Q40332215	330

IT Corporation/Fort Story  
Date: 04/08/94  
Job Number: Q403321/322  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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Total Petroleum Hydrocarbons Analysis - Continued

Client Sample ID: See below  
Sample Date:  
Analysis Date: 03/31/94

Client Sample ID	Lab Sample ID	Concentration mg/Kg
460D-032494	Q40332216	330
502F-032494	Q40332217	360
502F-032494 DUP	Q40332218	390
--	Method Blank	ND17

Client Sample ID: See Below  
Sample Date: 03/24/94  
Analysis Date: 03/31/94

Client Sample ID	Lab Sample ID	Matrix Spike Percent Recovery
408B-032494 MS	Q40332118	80%
502F-032494 MS	Q40332219	53%



IT Corporation/Fort Story  
Date: 04/08/94  
Job Number: Q403321/322  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

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Total Petroleum Hydrocarbons - Gasoline Range Organics

Client Sample ID: See below  
Sample Date: 03/24/94  
Analysis Date: 03/30 and 31/94

Client Sample ID	Lab Sample ID	Gasoline µg/Kg	Alpha, Alpha, Alpha- Trifluorotoluene Surrogate Spike Percent Recovery
450D-032494	Q40332101	ND7300	78%
492F-032494	Q40332102	ND6300	82%
393A-032494	Q40332103	ND6100	80%
435C-032494	Q40332104	ND6500	81%
440C-032494	Q40332105	ND7200	77%
477E-032494	Q40332106	ND6900	79%
477E DUP-032494	Q40332107	ND6500	79%
497F-032494	Q40332108	ND6500	81%
413B-032494	Q40332109	ND6400	79%
388A-032494	Q40332110	ND6500	80%
455D-032494	Q40332111	ND6600	84%
455D DUP-032494	Q40332112	ND6500	79%
472E-032494	Q40332113	ND6400	82%
430C-032494	Q40332114	ND6500	78%
430C DUP-032494	Q40332115	ND6400	79%
408B-032494	Q40332116	ND6300	79%
400B-032494	Q40332201	ND6400	90%
442D-032494	Q40332202	ND6700	81%
403B-032494	Q40332203	ND6300	81%
445D-032494	Q40332204	ND6700	81%
487F-032494	Q40332205	ND6800	82%
398A-032494	Q40332206	ND6400	89%
482E-032494	Q40332207	ND6900	80%
484F-032494	Q40332208	ND6300	84%
379A-032494	Q40332209	ND6300	86%
421C-032494	Q40332210	ND6500	82%
418B-032494	Q40332211	ND6300	82%
383A-032494	Q40332212	ND6300	81%
425C-032494	Q40332213	ND6500	83%
463E-032494	Q40332214	ND6300	82%
467E-032494	Q40332215	ND6100	79%
460D-032494	Q40332216	ND6400	81%
502F-032494	Q40332217	ND6300	82%
--	Method Blank 03/30/94	ND6200	82%
--	Method Blank 03/31/94	ND6200	66%

IT Corporation/Fort Story  
Date: 04/08/94  
Job Number: Q403321/322  
Client Project ID: 519029

**IT ANALYTICAL SERVICES**  
**5103 OLD WILLIAM PENN HIGHWAY**  
**EXPORT, PA 15632**  
**(412) 731-8806**

---

Total Petroleum Hydrocarbons - Gasoline Range Organics

Client Sample ID: See below  
Sample Date: 03/24/94  
Analysis Date: 03/30 and 31/94

Client Sample ID	Lab Sample ID	Gasoline Percent Recovery	Surrogate Percent Recovery
408B-032494	Q40332117/18	88%/89%	57%/60%
502F-032494	Q40332218/19	90%/101%	60%/71%

**CERTIFICATE OF ANALYSIS**

IT Corporation/Fort Story  
2790 Mosside Boulevard  
Monroeville, PA 15146  
Attn: Tom Mathison

April 12, 1994

Job Number: Q403298/299

The Certificate of Analysis is for the following:

Client Project ID: 519029  
Date Received by Lab: 03/24/94  
Number of Samples: Thirty-three  
Sample Type: Soil

**1.0 Introduction**

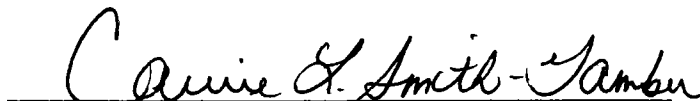
On March 24, 1994 thirty-three samples were received at ITAS Pittsburgh, labeled as follows:

294B-032394	349E-032394	273A-032394
336D-032394	280B-032394	315C-032394
378F-032394	322D-032394	357E-032394
255A-032394	322D DUP-032394	332D-032394
297C-032394	364F-032394	374F-032394
339E-032394	275B-032394	260A-032394
290B-032394	270A-032394	302C-032394
290B DUP-032394	312C-032394	344E-032394
369F-032394	354E-032394	285B-032394
265A-032394	317D-032394	285B DUP-032394
307C-032394	359F-032394	327D-032394

**2.0 Analytical Results/Methodology**

The analysis for Methods 9071/418.1, and 8015-Diesel were performed at our ITAS Laboratory in Austin, Texas. These results are enclosed.

Reviewed and Approved:

  
Carrie L. Smith-Gamber, Project Manager



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

ITAS-EXPORT  
IT CORPORATION  
5103 OLD WILLIAM PENN HWY.  
EXPORT, PENN. 15632  
CARRIE SMITH

Date: 04/07/94

Work Order: B4-03-273

P.O. Number: E94-036

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY 519029 SDG FS004 3I4610  
Date Received: 03/25/94  
Number of Samples: 20  
Sample Type: SOIL

### I. Introduction

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
275B-032394	B4-03-273-01
270A-032394	B4-03-273-02
312C-032394	B4-03-273-03
354E-032394	B4-03-273-04
317D-032394	B4-03-273-05
359F-032394	B4-03-273-06
273A-032394	B4-03-273-07
315C-032394	B4-03-273-08
357E-032394	B4-03-273-09
332D-032394	B4-03-273-10
374F-032394	B4-03-273-11

Reviewed and Approved:

  
Jon Bartel

Laboratory Director

American Council of Independent Laboratories  
International Association of Environmental Testing Laboratories  
American Association for Laboratory Accreditation

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 349E-032394

SAMPLE DATE: 03/23/94 10:10:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		210	11	mg/kg	04/02/94	EPA9071
Moisture		4.2		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	130	9	mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	87
	C32	96

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 260A-032394

SAMPLE DATE: 03/23/94 09:00:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		190	11	mg/kg	04/02/94	EPA9071
Moisture		4.2		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	90	1.7	mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	72
	C32	64

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 275B-032394

SAMPLE DATE: 03/23/94 11:00:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		89	11 mg/kg	04/02/94	EPA9071
Moisture		3.6	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	73	1.7 mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	94
	C32	101

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 270A-032394

SAMPLE DATE: 03/23/94 11:20:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		200	10	mg/kg	04/02/94	EPA9071
Moisture		2.0		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	94	1.7	mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	88
	C32	84



Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-03-273

SAMPLE ID: 312C-032394

SAMPLE DATE: 03/23/94 11:40:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		200	11	mg/kg	04/02/94	EPA9071
Moisture		3.9		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	55	1.7	mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	69
	C32	67

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 354E-032394

SAMPLE DATE: 03/23/94 11:50:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		220	11	mg/kg	04/02/94	EPA9071
Moisture		6.7		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	120	1.8	mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	77
	C32	75

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 317D-032394

SAMPLE DATE: 03/23/94 12:00:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		92	12	mg/kg	04/02/94	EPA9071
Moisture		14		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	46	2	mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	107
	C32	100

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 359F-032394

SAMPLE DATE: 03/23/94 12:15:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		320	10	mg/kg	04/02/94	EPA9071
Moisture		0.81		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	92	1.7	mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	69
	C32	83

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-03-273

SAMPLE ID: 273A-032394

SAMPLE DATE: 03/23/94 12:10:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		310	10	mg/kg	04/02/94	EPA9071
Moisture		1.6		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	95	1.7	mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	81
	C32	73

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 315C-032394

SAMPLE DATE: 03/23/94 12:40:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		56	11	mg/kg	04/02/94	EPA9071
Moisture		6.5		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	20	1.8	mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	114
	C32	113

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 357E-032394

SAMPLE DATE: 03/23/94 12:35:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		59	11	mg/kg	04/02/94	EPA9071
Moisture		6.8		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	43	1.8	mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	125
	C32	123

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 332D-032394

SAMPLE DATE: 03/23/94 08:40:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		480	11 mg/kg	04/02/94	EPA9071
Moisture		4.1	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	300	1.7 mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	111
	C32	96



Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 374F-032394

SAMPLE DATE: 03/23/94 09:00:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		32	11 mg/kg	04/02/94	EPA9071
Moisture		3.5	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	8.1	1.7 mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	97
	C32	100

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 302C-032394

SAMPLE DATE: 03/23/94 09:15:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		360	11 mg/kg	04/02/94	EPA9071
Moisture		3.6	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	140	1.7 mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	76
	C32	70

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 344E-032394

SAMPLE DATE: 03/23/94 09:15:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		260	11 mg/kg	04/02/94	EPA9071
Moisture		3.2	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	280	1.7 mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	105
	C32	85

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 285B-032394

SAMPLE DATE: 03/23/94 09:20:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		120	10 mg/kg	04/02/94	EPA9071
Moisture		2.2	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	140	1.7 mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	84
	C32	72

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 285BDUP-032394

SAMPLE DATE: 03/23/94 09:20:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		88	10 mg/kg	04/02/94	EPA9071
Moisture		2.7	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	83	1.7 mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	102
	C32	91

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 327D-032394

SAMPLE DATE: 03/23/94 09:20:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		610	11 mg/kg	04/02/94	EPA9071
Moisture		3.9	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	290	1.7 mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	95
	C32	78

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004

3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 327D-032394 MATRIX SPIKE

SAMPLE DATE: 03/23/94 09:20:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		66		% Rec	04/02/94	EPA9071
TPH-D by GC (EPA8015_MOD)	1	720		% Rec	03/30/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
o-terphenyl 46  
C32 \*
- \* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: 327D-032394 MSD  
 SAMPLE DATE: 03/23/94 09:20:00  
 SAMPLE MATRIX: SOIL

Test Name	Note Ref	Result	Reporting Limit	Units	Date Analyzed	Method Reference
9071/418.1 for TPH		63		% Rec	04/02/94	EPA9071
TPH-D by GC (EPA8015_MOD)	1	830		% Rec	03/30/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	53
	C32	48



Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

SAMPLE ID: METHOD BLANK

SAMPLE DATE:

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		ND	10 mg/kg	04/02/94	EPA9071
TPH-D by GC (EPA8015_MOD)	1	ND	2 mg/kg	03/30/94	EPA8015_MOD

Referenced notes for these results:

	Recovery %
1 Surrogate	
o-terphenyl	78
C32	97

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-273

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Referenced notes for this work order:

B403273

The chromatograms generally contained a pattern from C14 to C44, although integration occurred from C9 to C24 (diesel range).

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-03-273

#### IV. Methodology

Requested analyses were performed according to the following methods.

##### TEST NAME 9071/418.1 for TPH

TEST CODE 9071IR

9071 Prep and  
IR Analysis

Method 9071, SW846, Test Methods for Evaluating Solid Waste, Third Edition. Soxhlet extraction from Method 9071 using freon and infrared analysis of the extract using Method 418.1.

##### TEST NAME Moisture

TEST CODE MOIST

Moisture

Standard Method 209F/2540G or EPA CLP. Percent moisture obtained by drying of soil or sludge sample at 103-105 degrees centigrade. Moisture content is 100% - %Total Solids.

##### TEST NAME TPH-D by GC (EPA8015\_MOD)

TEST CODE TPH\_GC

TPH-Extractable  
Petroleum  
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

8403273  
Reference Document No. 484101  
Page 1 of 2

Project Name/No. <sup>1</sup> Fur Story 519029 Samples Shipment Date <sup>7</sup> 3/24/94  
Sample Team Members <sup>2</sup> DeMarco/Bernardo Lab Destination <sup>8</sup> EDS Austin  
Profit Center No. <sup>3</sup> 4610 Lab Contact <sup>9</sup> Chris Achycoff  
Project Manager <sup>4</sup> Carrie Smith < Project Contact/Phone <sup>12</sup> 412-731-8806  
Purchase Order No. <sup>6</sup> E94-036 Carrier/Waybill No. <sup>13</sup> FedEx 242305045  
Required Report Date <sup>11</sup> 4-6-94

Bill to: <sup>5</sup> EDS PETA  
Report to: <sup>10</sup> EDS PETA

### ONE CONTAINER PER LINE

Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time <sup>16</sup> Collected	Container <sup>17</sup> Type	Sample <sup>18</sup> Volume	Pre- servative <sup>19</sup>	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
275B-032394	Soil Q403299-01	3-23-94 1100	AMBER GLASS	1X250ml 1X60ml	ICE	TPH DIESEL 80513550 TPHC 9071/418,1	Good 1°C Leak 3-25-94	
270A-032394		02 1120					FOR LAB USE ONLY	
322C-032394		03 1140						
354E-032394		04 1150						
317D-032394		05 1200					FOR LAB USE ONLY	
359F-032394		06 1215						
273A-032394		07 1210						
315C-032394	✓	08 1240	✓	✓	✓	✓	✓	

Special Instructions: <sup>23</sup> Perform QC on 327D-032394 SDG FSP/04

Possible Hazard Identification: <sup>24</sup> Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Sample Disposal: <sup>25</sup> Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: <sup>26</sup> Normal ☒ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐

Project Specific (specify):

1. Relinquished by <sup>28</sup> <u>Robert H. Long EDS PETA</u> (Signature/Affiliation)	Date: <u>3/24/94</u> Time: <u>1700</u>	1. Received by <sup>28</sup> <u>Lori Church IT</u> (Signature/Affiliation)	Date: <u>3-25-94</u> Time: <u>0852</u>
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: <sup>29</sup>

Write: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



8403273  
Reference Document No.<sup>30</sup> 484101  
Page 2 of 2

Project Name FORT STORY

Project No. 519029

Samples Shipment Date 3/24/94

## ONE CONTAINER PER LINE

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
357E-032394	Soil Q304299-09	3-23-94 1:235	Amber Glass	150ml 150ml	ice	TPH DIESEL 8015/3500 TPHC 9071/418.1	Good 1°C Cue 3-25-94	
332D-032394		10 8:40						
374F-032394		11 9:00						
260A-032394		12 9:00						
302C-032394		13 9:15						
344E-032394		14 9:15						
285B-032394		15 9:20						
285B DUP-032394		16 9:20						
327D-032394		17 9:20 18 ms 19 ms						
BF 3/24/94								

White: To accompany samples

Yellow: Field copy

\*See back of form for special instructions

## Cooler Receipt Form

Project: Fort Story 519029  
Export

Sam  
HMS No. 8403273  
3-25-94

Use other side of this form to note details concerning check-in problems.

### A. Preliminary Examination Phase:

Date cooler opened: 3-25-94

C-of-C No.: 484101

By (print) Corri Church

(sign) Corri Church

1. Did cooler come with a shipping slip (air bill, etc.)? ☒ Yes ☐ No  
If YES, enter carrier name & air bill no. here: Fed x 2423805 045
2. Were custody seals on outside of cooler? ☒ Yes ☐ No  
How many & where: 1  
Seal date: — Seal name: —
3. Were custody seals unbroken and intact at the date and time of arrival? ☒ Yes ☐ No
4. Did you screen samples for radioactivity using the Geiger Counter? ☐ Yes ☒ No
5. Were custody papers sealed in a plastic bag and taped inside of the lid? ☐ Yes ☒ No
6. Were custody papers filled out properly (ink, signed, etc.)? ☒ Yes ☐ No
7. Did you sign custody papers in the appropriate place? ☒ Yes ☐ No
8. Was project identifiable from custody papers? ☒ Yes ☐ No  
If YES, enter project name at the top of this form.
9. If required, was enough ice used? ☒ Yes ☐ No  
Type of ice: wet
10. Have designated person initial here to acknowledge receipt of cooler: LXC Date: 3-25-94

### B. Log-in Phase:

Date samples were logged-in: 3-25-94

By (print) Corri Church (sign) Corri Church

11. Describe type of packing in cooler: vermiculite
12. Were all bottles sealed in separate plastic bags? ☒ Yes ☐ No
13. Did all bottles arrive unbroken & were labels in good condition? ☒ Yes ☐ No
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? ☒ Yes ☐ No
15. Did all bottle labels agree with custody papers? ☒ Yes ☐ No
16. Were correct containers used for the test indicated? ☒ Yes ☐ No
17. Were correct preservatives added to samples? ☒ Yes ☐ No
18. Was a sufficient amount of sample sent for tests indicated? ☒ Yes ☐ No
19. Were bubbles absent in volatile samples? N/A Yes ☐ No  
If NO, list by sample number: —
20. Was the project manager called and status discussed? ☐ Yes ☒ No  
If yes, give details on the back of this form.
21. Who was called? — By whom? — Date: —



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

ITAS-EXPORT  
IT CORPORATION  
5103 OLD WILLIAM PENN HWY.  
EXPORT, PENN. 15632  
CARRIE SMITH

Date: 04/07/94

Work Order: B4-03-275

P.O. Number: E94-036

This is the Certificate of Analysis for the following samples:

Client Work ID: FT STORY 519029 SDG FS004 3I4610  
Date Received: 03/25/94  
Number of Samples: 19  
Sample Type: SOIL

### I. Introduction

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
294B-032394	B4-03-275-01
336D-032394	B4-03-275-02
378F-032394	B4-03-275-03
255A-032394	B4-03-275-04
297C-032394	B4-03-275-05
339E-032394	B4-03-275-06
290B-032394	B4-03-275-07
290BDUP-032394	B4-03-275-08
369F-032394	B4-03-275-09
265A-032394	B4-03-275-10
307C-032394	B4-03-275-11

Reviewed and Approved:

  
Jon Bartell

Laboratory Director

American Council of Independent Laboratories  
International Association of Environmental Testing Laboratories  
American Association for Laboratory Accreditation

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-03-273

Samples, continued from above:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
302C-032394	B4-03-273-13
344E-032394	B4-03-273-14
285B-032394	B4-03-273-15
285BDUP-032394	B4-03-273-16
327D-032394	B4-03-273-17
327D-032394 MATRIX SPIKE	B4-03-273-18
327D-032394 MSD	B4-03-273-19
METHOD BLANK	B4-03-273-20

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.



Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

Samples, continued from above:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
280B-032394	B4-03-275-13
322D-032394	B4-03-275-14
322DDUP-032394	B4-03-275-15
364F-032394	B4-03-275-16
364F-032394 MATRIX SPIKE	B4-03-275-17
364F-032394 MSD	B4-03-275-18
METHOD BLANK	B4-03-275-19

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-03-275

SAMPLE ID: 294B-032394

SAMPLE DATE: 03/23/94 07:15:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		2000	250 mg/kg	04/02/94	EPA9071
Moisture		2.3	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	930	34 mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	81
	C32	94

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-03-275

SAMPLE ID: 336D-032394

SAMPLE DATE: 03/23/94 07:15:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		900	53	mg/kg	04/02/94	EPA9071
Moisture		3.3		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	480	9	mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	90
	C32	89

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-03-275

SAMPLE ID: 378F-032394

SAMPLE DATE: 03/23/94 07:40:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		620	11	mg/kg	04/02/94	EPA9071
Moisture		3.7		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	350	9	mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	87
	C32	87

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 255A-032394

SAMPLE DATE: 03/23/94 07:40:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		740	53	mg/kg	04/02/94	EPA9071
Moisture		3.4		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	54	2	mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	106
	C32	108

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-03-275

SAMPLE ID: 297C-032394

SAMPLE DATE: 03/23/94 08:00:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		400	11	mg/kg	04/02/94	EPA9071
Moisture		3.4		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	250	2	mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	74
	C32	62

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 339E-032394

SAMPLE DATE: 03/23/94 08:15:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		650	11 mg/kg	04/02/94	EPA9071
Moisture		6.3	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	440	4 mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	83
	C32	67

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-03-275

SAMPLE ID: 290B-032394

SAMPLE DATE: 03/23/94 08:30:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		450	11 mg/kg	04/02/94	EPA9071
Moisture		3.7	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	210	4 mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	74
	C32	71



Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 290BDUP-032394

SAMPLE DATE: 03/23/94 08:30:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		250	11	mg/kg	04/02/94	EPA9071
Moisture		3.2		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	130	2	mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	69
	C32	70

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 369F-032394

SAMPLE DATE: 03/23/94 09:40:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		480	10	mg/kg	04/02/94	EPA9071
Moisture		2.2		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	190	3	mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	77
	C32	108

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-03-275

SAMPLE ID: 265A-032394

SAMPLE DATE: 03/23/94 09:40:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		280	11	mg/kg	04/02/94	EPA9071
Moisture		2.6		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	170	2	mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	88
	C32	85

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-03-275

SAMPLE ID: 307C-032394

SAMPLE DATE: 03/23/94 10:10:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		2500	140 mg/kg	04/02/94	EPA9071
Moisture		8.1	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	730	9 mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	64
	C32	93

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-03-275

SAMPLE ID: 280B-032394

SAMPLE DATE: 03/23/94 10:20:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		250	11	mg/kg	04/02/94	EPA9071
Moisture		3.6		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	130	9	mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	88
	C32	93

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 322D-032394

SAMPLE DATE: 03/23/94 10:30:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		4800	280 mg/kg	04/02/94	EPA9071
Moisture		11	% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	1300	9 mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	*
	C32	*
	* Surrogate diluted out.	

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 322DDUP-032394

SAMPLE DATE: 03/23/94 10:30:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		7500	130	mg/kg	04/02/94	EPA9071
Moisture		5.7		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	2300	18	mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	64
	C32	*
	* Surrogate diluted out.	

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-03-275

SAMPLE ID: 364F-032394

SAMPLE DATE: 03/23/94 10:30:00

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		720	53	mg/kg	04/02/94	EPA9071
Moisture		4.5		% Moisture	03/29/94	209_F
TPH-D by GC (EPA8015_MOD)	1	280	9	mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	83
	C32	75



Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 314610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 364F-032394 MATRIX SPIKE

SAMPLE DATE: 03/23/94 10:30:00

SAMPLE MATRIX: SOIL

Test Name	Note Ref	Result	Reporting Limit	Units	Date Analyzed	Method Reference
9071/418.1 for TPH		59		% Rec	04/02/94	EPA9071
TPH-D by GC (EPA8015_MOD)	1	310		% Rec	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	100
	C32	90

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: 364F-032394 MSD  
 SAMPLE DATE: 03/23/94 10:30:00  
 SAMPLE MATRIX: SOIL

Test Name	Note Ref	Result	Reporting		Date Analyzed	Method Reference
			Limit	Units		
9071/418.1 for TPH		74		% Rec	04/02/94	EPA9071
TPH-D by GC (EPA8015_MOD)	1	240		% Rec	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	81
	C32	77

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

SAMPLE ID: METHOD BLANK

SAMPLE DATE:

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
9071/418.1 for TPH		ND	10	mg/kg	04/02/94	EPA9071
TPH-D by GC (EPA8015_MOD)	1	ND	2	mg/kg	04/01/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	83
	C32	89

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

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Referenced notes for this work order:

B403275

The chromatograms generally contained a pattern from C14 to C44, although integration occurred from C9 to C24 (diesel range).

Company: ITAS-EXPORT

Date: 04/07/94

Client Work ID: FT STORY 519029 SDG FS004 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-03-275

---

IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME 9071/418.1 for TPH

TEST CODE 9071IR

9071 Prep and  
IR Analysis

Method 9071, SW846, Test Methods for Evaluating Solid Waste, Third Edition. Soxhlet extraction from Method 9071 using freon and infrared analysis of the extract using Method 418.1.

TEST NAME Moisture

TEST CODE MOIST

Moisture

Standard Method 209F/2540G or EPA CLP. Percent moisture obtained by drying of soil or sludge sample at 103-105 degrees centigrade. Moisture content is 100% - %Total Solids.

TEST NAME TPH-D by GC (EPA8015\_MOD)

TEST CODE TPH\_GC

TPH-Extractable  
Petroleum  
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

8403275

Reference Document No. 484100  
Page 1 of 2

Project Name/No. 1 Fort Story/5A009 Samples Shipment Date 7 3/24/94  
Sample Team Members 2 Demarco/Bernardo Lab Destination 8 ETAS Austin  
Profit Center No. 3 4610 Lab Contact 9 Chris Schup  
Project Manager 4 Carrie Smith Project Contact/Phone 12 412-731-8806  
Purchase Order No. 6 E94-036 Carrier/Waybill No. 13 FEDX2423805036  
Required Report Date 11 4/6/94

Bill to: 5 ETAS Pitt  
Report to: 10 ETAS Pitt

### ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
294B-032394	Q403298-01 SOIC	3-23-94 7:15	AMBER GLASS	1250ml 1860ml	ICE	TPH DIESEL 8015/3550 TPHC 9071/418.1	Good 1 <sup>st</sup> LW 3-25-94	
336D-032394	Q403298-02	7:15					FOR LAB USE ONLY	
378F-032394	03	7:40						
255A-032394	04	7:40						
297C-032394	05	8:00						
339E-032394	06	8:15					FOR LAB USE ONLY	
290B-032394	07	8:30						
290B DOP-032394	08	8:30						

Special Instructions: 23 Perform QC on 364F-032394 SDG FS003

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by <sup>28</sup> Robert Finlay ETAS Date: 3/24/94  
(Signature/Affiliation) Time: 1700

1. Received by <sup>28</sup> Lorie Chud IT Date: 3-25-94  
(Signature/Affiliation) Time: 0852

2. Relinquished by (Signature/Affiliation) Date: Time:

2. Received by (Signature/Affiliation) Date: Time:

3. Relinquished by (Signature/Affiliation) Date: Time:

3. Received by (Signature/Affiliation) Date: Time:

Comments: <sup>29</sup>

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



8403275  
Reference Document No.<sup>30</sup> 484100  
Page 2 of 2

Samples Shipment Date 3/24/94

[illegible]

**\*See back of form for special instructions**

# Cooler Receipt Form

Project: Ft. Story 519029 Export Sam LIMS No. 8403275  
XAC 3-25-94

Use other side of this form to note details concerning check-in problems.

## A. Preliminary Examination Phase:

- Date cooler opened: 3-25-94 C-of-C No.: 484100  
By (print) Corri Church (sign) Corri Church
- Did cooler come with a shipping slip (air bill, etc.)? Yes No  
If YES, enter carrier name & air bill no. here: Felix 2423805036
  - Were custody seals on outside of cooler? Yes No  
How many & where: 1  
Seal date: - Seal name: -
  - Were custody seals unbroken and intact at the date and time of arrival: Yes No
  - Did you screen samples for radioactivity using the Geiger Counter: Yes No
  - Were custody papers sealed in a plastic bag and taped inside of the lid? Yes No
  - Were custody papers filled out properly (ink, signed, etc.)? Yes No
  - Did you sign custody papers in the appropriate place? Yes No
  - Was project identifiable from custody papers? Yes No  
If YES, enter project name at the top of this form.
  - If required, was enough ice used? Yes No  
Type of ice: wet
  - Have designated person initial here to acknowledge receipt of cooler: XAC Date: 3-25-94

## B. Log-in Phase:

- Date samples were logged-in: 3-25-94 By (print) Corri Church (sign) Corri Church
- Describe type of packing in cooler: vermiculite
  - Were all bottles sealed in separate plastic bags? Yes No
  - Did all bottles arrive unbroken & were labels in good condition? Yes No
  - Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? Yes No
  - Did all bottle labels agree with custody papers? Yes No
  - Were correct containers used for the test indicated? Yes No
  - Were correct preservatives added to samples? Yes No
  - Was a sufficient amount of sample sent for tests indicated? Yes No
  - Were bubbles absent in volatile samples? N/A Yes No  
If NO, list by sample number: \_\_\_\_\_
  - Was the project manager called and status discussed? Yes No  
If yes, give details on the back of this form.
  - Who was called? \_\_\_\_\_ By whom? \_\_\_\_\_ Date: \_\_\_\_\_



**CERTIFICATE OF ANALYSIS**

IT Corporation/Fort Story  
2790 Mosside Boulevard  
Monroeville, PA 15146  
Attn: Tom Mathison

April 15, 1994

Job Number: Q403344/345 Revised

The Certificate of Analysis is for the following:

Client Project ID: 519029  
Date Received by Lab: 03/29 and 30/94  
Number of Samples: Thirty-four  
Sample Type: Soil


1.0 Introduction

On March 29 and 30, 1994 thirty-four samples were received at ITAS Pittsburgh, labeled as follows:

616F-32894	611F-32894	621F-32894
574D-32894	609E-32894	579D-32894
522A-32894	525A-32894	537B-32894
527B-32894	542B-32894	537B DUP-32894
606E-32894	584D-32894	601E-32894
564C-32894	569D-32894	559C-32894
532B-32894	569D DUP-32894	517A-32894
532B DUP-32894	554C-32894	
567C-32894	512A-32894	

The analysis for TPH-diesel was performed at our ITAS laboratory in Austin, Texas. These results are enclosed.

Reviewed and Approved:

  
Carrie L. Smith-Gamber, Project Manager

**CERTIFICATE OF ANALYSIS**

ITAS-EXPORT  
IT CORPORATION  
5103 OLD WILLIAM PENN HWY.  
EXPORT, PENN. 15632  
CARRIE SMITH

Date: 04/14/94

Work Order: B4-03-318

P.O. Number: E94-037

This is the Certificate of Analysis for the following samples:

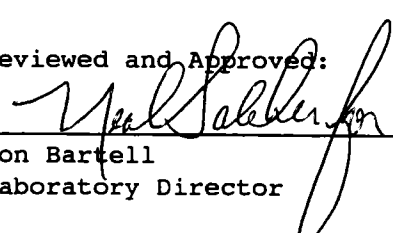
Client Work ID: FT STORY 519029 SDG FS007 3I4610  
Date Received: 03/30/94  
Number of Samples: 19  
Sample Type: SOIL

**I. Introduction**

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
616F-32894	B4-03-318-01
616F-32894 MATRIX SPIKE	B4-03-318-02
616F-32894 MSD	B4-03-318-03
574D-32894	B4-03-318-04
522A-32894	B4-03-318-05
527B-32894	B4-03-318-06
606E-32894	B4-03-318-07
564C-32894	B4-03-318-08
532B-32894	B4-03-318-09
532BDUP-32894	B4-03-318-10
567C-32894	B4-03-318-11
611F-32894	B4-03-318-12
609E-32894	B4-03-318-13

Reviewed and Approved:

  
Jon Bartell  
Laboratory Director

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

Samples, continued from above:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
525A-32894	B4-03-318-14
542B-32894	B4-03-318-15
584D-32894	B4-03-318-16
569D-32894	B4-03-318-17
569DDUP-32894	B4-03-318-18
METHOD BLANK	B4-03-318-19

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 616F-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	46	2.0 mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	85
	C32	*
	* Surrogate diluted out.	

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 616F-32894 MATRIX SPIKE

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	95		% Rec	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	95
	C32	120

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610

Work Order: B4-03-318

SAMPLE ID: 616F-32894 MSD

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	89		% Rec	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	68
	C32	*
	* Surrogate diluted out.	

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 574D-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	ND	2.0 mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	73
	C32	96

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 522A-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	320	9.6 mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	56
	C32	57



Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 527B-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	160	2.0 mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	56
	C32	65

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 606E-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	410	19 mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	56
	C32	69

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 564C-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	45	1.9 mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	61
	C32	65

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 532B-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	180	1.8 mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	61
	C32	75

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 532BDUP-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	140	1.8 mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

- |   |  |            |
|---|--|------------|
| 1 | Surrogate  | Recovery % |
|   | o-terphenyl  | 51         |
|   | C32  | *          |
|   | * Surrogate not reported due to matrix interference. |            |

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610

Work Order: B4-03-318

SAMPLE ID: 567C-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	27	1.9 mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	107
	C32	75

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 611F-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	4.1	2.0 mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	47
	C32	61

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 609E-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	17	2.0 mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	72
	C32	77



Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610

Work Order: B4-03-318

SAMPLE ID: 525A-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	10	2.0	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	77
	C32	77

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610

Work Order: B4-03-318

SAMPLE ID: 542B-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	230	1.8 mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

- |   |  |            |
|---|--|------------|
| 1 | Surrogate  | Recovery % |
|   | o-terphenyl  | 60         |
|   | C32  | *          |
|   | * Surrogate not reported due to matrix interference. |            |

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 584D-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	440	19	mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	45
	C32	47

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 569D-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	190	2.0	mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	78
	C32	86

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

SAMPLE ID: 569DDUP-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	150	1.9 mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	52
	C32	58

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 314610

Work Order: B4-03-318

SAMPLE ID: METHOD BLANK

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	ND	2.0 mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	68
	C32	77

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

**Referenced notes for this work order:**

B403318

The chromatograms generally contained a pattern from C14 to C44, although integration occurred from C9 to C24 (diesel range).

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS007 3I4610

Work Order: B4-03-318

#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable	EPA Methods 3510/3520/3550/3580 for extraction of
Petroleum	samples and modified EPA Method 8015 for GC/FID
Hydrocarbons	analysis of extracts run against a diesel standard.





INTERNATIONAL  
ANALOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

B403318

Reference Document No. 484103

Page 1 of 2

Project Name/No. 1 FORT STARY 519029

Samples Shipment Date 7 3/25/94 <sup>OF 3/29/94</sup> 3/29/94

Bill to: 5 ITAS PITT

Sample Team Members 2

Lab Destination 8 ITAS AUSTIN

Profit Center No. 3 4610

Lab Contact 9 C. Schepcraft

Project Manager 4 C. Smith

Project Contact/Phone 12 412-731-8806

Purchase Order No. 6 E94-037

Carrier/Waybill No. 13 FEDX 2123805483

Report to: 10 ITAS PITT

Required Report Date 11 4/11/94

## ONE CONTAINER PER LINE

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Pre-servative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
616F-32894	Soil Q403344-01	3/28/94 1220	AMBER 61055	240ml	-	TPH DIESEL	Good 4°C	
574D-32894	- 02	1230					3/30/94	
522A-32894	- 03	1240						
527B-32894	- 04	1250						
606E-32894	- 05	1340						
564C-32894	- 06	1:00						
532B-32894	- 07	1:10						
532B DUP-32894	- 08	1:20						

Special Instructions: 23 QC SAMPLE 616F-32894

SDG FS007

Possible Hazard Identification: 24

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: 25

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: 26

Normal ☒ Rush ☐

QC Level: 27

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by 28 Boffin

Date: 3/29/94  
Time: 1700

1. Received by 28 J. C. G.

Date: 3/30/94  
Time: 0940

2. Relinquished by

Date:  
Time:

2. Received by

Date:  
Time:

3. Relinquished by

Date:  
Time:

3. Received by

Date:  
Time:

Comments: 29

Client is aware that samples bottles have 32594 on them and they should be 32894

White: To accompany samples

Yellow: Field copy

\*See back of form for special instructions.



B403318  
Reference Document No. 3<sup>u</sup> 184103  
Page 2 of 2

Samples Shipment Date 3/29/94

[illegible]

**\* See back of form for special instructions**

# Cooler Receipt Form

Project: FORE STORY/EXPORT LIMS No. B403318

Use other side of this form to note details concerning check-in problems.

## A. Preliminary Examination Phase:

Date cooler opened: 3/30/94

C-of-C No.: 404123

By (print) BRUCE C. CAVE

(sign) B-C

1. Did cooler come with a shipping slip (air bill, etc.)? Yes No  
If YES, enter carrier name & air bill no. here: TEDX 242 3805 483
2. Were custody seals on outside of cooler? Yes No  
How many & where: 1 OVER TAPE ON FRONT SEAL 1 OVER OPPOSITE REAR  
Seal date: NONE Seal name: NONE
3. Were custody seals unbroken and intact at the date and time of arrival? Yes No
4. Did you screen samples for radioactivity using the Geiger Counter? Yes No
5. Were custody papers sealed in a plastic bag and taped inside of the lid? Yes No
6. Were custody papers filled out properly (ink, signed, etc.)? Yes No
7. Did you sign custody papers in the appropriate place? Yes No
8. Was project identifiable from custody papers? Yes No  
If YES, enter project name at the top of this form.
9. If required, was enough ice used? Yes No  
Type of ice: WET ICE
10. Have designated person initial here to acknowledge receipt of cooler: BC Date: 3/30/94

## B. Log-in Phase:

Date samples were logged-in: 3/30/94 By (print) CHRIS SCHERCOFF (sign) Chris Schercoff

11. Describe type of packing in cooler: WET KIM LITTER - REAL MESSY
12. Were all bottles sealed in separate plastic bags? Yes No
13. Did all bottles arrive unbroken & were labels in good condition? Yes No
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? Yes No
15. Did all bottle labels agree with custody papers? VERIFIED BY NOTES ON COB FROM EXPORT Yes No
16. Were correct containers used for the test indicated? Yes No
17. Were correct preservatives added to samples? Yes No
18. Was a sufficient amount of sample sent for tests indicated? Yes No
19. Were bubbles absent in volatile samples? n/a Yes No  
If NO, list by sample number: \_\_\_\_\_
20. Was the project manager called and status discussed? Yes No  
If yes, give details on the back of this form.
21. Who was called? CARRIE SMITH By whom? C. SCHERCOFF Date: 3/30/94

**CERTIFICATE OF ANALYSIS**

ITAS-EXPORT  
IT CORPORATION  
5103 OLD WILLIAM PENN HWY.  
EXPORT, PENN. 15632  
CARRIE SMITH

Date: 04/14/94

Work Order: B4-03-322

P.O. Number: E94-037

This is the Certificate of Analysis for the following samples:

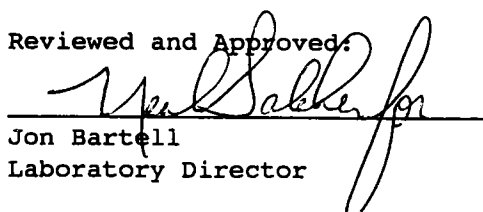
Client Work ID: FT STORY 519029 SDG FS008 3I4610  
Date Received: 03/30/94  
Number of Samples: 12  
Sample Type: SOIL

**I. Introduction**

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
554C-32894	B4-03-322-01
512A-32894	B4-03-322-02
621F-32894	B4-03-322-03
579D-32894	B4-03-322-04
537B-32894	B4-03-322-05
537BDUP-32894	B4-03-322-06
601E-32894	B4-03-322-07
559C-32894	B4-03-322-08
517A-32894	B4-03-322-09
517A-32894      MATRIX SPIKE	B4-03-322-10
517A-32894      MSD	B4-03-322-11
METHOD BLANK	B4-03-322-12

Reviewed and Approved:

  
Jon Bartell  
Laboratory Director

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 3I4610

Work Order: B4-03-322

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 3I4610

Work Order: B4-03-322

SAMPLE ID: 554C-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	1200	19 mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	101
	C32	126

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 3I4610

Work Order: B4-03-322

SAMPLE ID: 512A-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	99	2.0 mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	53
	C32	53

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 3I4610

Work Order: B4-03-322

SAMPLE ID: 621F-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	35	1.9 mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	57
	C32	60



Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610

Work Order: B4-03-322

SAMPLE ID: 579D-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	1500	92	mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	90
	C32	127

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 3I4610

Work Order: B4-03-322

SAMPLE ID: 537B-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	52	1.7 mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	56
	C32	52

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 3I4610

Work Order: B4-03-322

SAMPLE ID: 537BDUP-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	57	1.7 mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	67
	C32	60

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610

Work Order: B4-03-322

SAMPLE ID: 601E-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	3100	180 mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	*
	C32	*
	* Surrogate diluted out.	

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 3I4610

Work Order: B4-03-322

SAMPLE ID: 559C-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	3000	92 mg/kg	04/07/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	*
	C32	*
	* Surrogate diluted out.	

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 3I4610

Work Order: B4-03-322

SAMPLE ID: 517A-32894

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	910	94 mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	*
	C32	*
	* Surrogate diluted out.	

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 3I4610

Work Order: B4-03-322

SAMPLE ID: 517A-32894 MATRIX SPIKE

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	150		% Rec	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	*
	C32	*
	* Surrogate diluted out.	

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 3I4610

Work Order: B4-03-322

SAMPLE ID: 517A-32894 MSD

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	160		% Rec	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	*
	C32	*
	* Surrogate diluted out.	



Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 314610

Work Order: B4-03-322

SAMPLE ID: METHOD BLANK

SAMPLE DATE: 03/28/94

SAMPLE MATRIX: SOIL

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	ND	2.0 mg/kg	04/06/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	o-terphenyl	83
	C32	86

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008

3I4610

Work Order: B4-03-322

Referenced notes for this work order:

B403322

The chromatograms generally contained a pattern from C14 to C44, although integration occurred from C9 to C24 (diesel range).

Company: ITAS-EXPORT

Date: 04/14/94

Client Work ID: FT STORY 519029 SDG FS008 3I4610

Work Order: B4-03-322

#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable	EPA Methods 3510/3520/3550/3580 for extraction of
Petroleum	samples and modified EPA Method 8015 for GC/FID
Hydrocarbons	analysis of extracts run against a diesel standard.



INTERNATIONAL  
ANALOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

15403322

Reference Document No. 484123

Page 1 of 2

Project Name/No. Fort Stry 519029

Samples Shipment Date 3/29/94

Bill to: ITAB PTT

Sample Team Members 2

Lab Destination ITAB Austin

Profit Center No. 3 4610

Lab Contact C. Schepard

Project Manager C. Smith

Project Contact/Phone 412-731-8806

Purchase Order No. 6 694-037

Carrier/Waybill No. 13 Fedex 2423805483

Report to: ITAB PTT

Required Report Date 11 4/11/94

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
554C-32894	SOIL 040345-01	3-28-94 9:40	Amber Glass	200ml	—	TPH Diesel	6000 4°C	
512A-32894	02	10:00					3/30/94	
621F-32894	03	10:10						
579D-32894	04	10:20						
537B-32894	05	10:30						
537B 06P-32894	06	10:30						
601E-32894	07	10:40						
559C-32894	08	11:00						

Special Instructions: 23 QC sample 517A-32894

SDG FSP08

Possible Hazard Identification: 24

Non-hazardous ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: 25

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: 26

Normal ☒ Rush ☐

QC Level: 27

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by 28 Bob Anley ITAB  
(Signature/Affiliation)

Date: 3/29/94  
Time: 1700

1. Received by 28 J-C-C IT  
(Signature/Affiliation)

Date: 3/30/94  
Time: 0940

2. Relinquished by  
(Signature/Affiliation)

Date:  
Time:

2. Received by  
(Signature/Affiliation)

Date:  
Time:

3. Relinquished by  
(Signature/Affiliation)

Date:  
Time:

3. Received by  
(Signature/Affiliation)

Date:  
Time:

Comments: 29 Client is aware that sample bottles have 32894 on them and they should be 3/28/94

Write: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

B403322

Reference Document No. 30

Page 2 of 2

84123

Project Name FORT STORY

Project No. 519029

Samples Shipment Date

## ONE CONTAINER PER LINE

[illegible]

White: To accompany samples

Yellow: Field copy

**\*See back of form for special instructions**

# Cooler Receipt Form

Project:

PT. STORY/EXPORT

LIMS No.

B403322

Use other side of this form to note details concerning check-in problems.

## A. Preliminary Examination Phase:

Date cooler opened:

3/30/94

C-of-C No.:

484123

By (print)

BRUCE C. CAVE

(sign)

B.C.C.

1. Did cooler come with a shipping slip (air bill, etc.)? ☒ Yes ☐ No  
If YES, enter carrier name & air bill no. here: Fed ex 242 3805403
2. Were custody seals on outside of cooler? ☒ Yes ☐ No  
How many & where: 2 - 1 on left front one on right rear  
Seal date: NONE Seal name: NONE
3. Were custody seals unbroken and intact at the date and time of arrival: ☒ Yes ☐ No
4. Did you screen samples for radioactivity using the Geiger Counter: ☒ Yes ☐ No
5. Were custody papers sealed in a plastic bag and taped inside of the lid? ☐ Yes ☒ No
6. Were custody papers filled out properly (ink, signed, etc.)? ☒ Yes ☐ No
7. Did you sign custody papers in the appropriate place? ☒ Yes ☐ No
8. Was project identifiable from custody papers? ☒ Yes ☐ No  
If YES, enter project name at the top of this form.
9. If required, was enough ice used? ☒ Yes ☐ No  
Type of ice: WET ICE
10. Have designated person initial here to acknowledge receipt of cooler: BC Date: 3/30/94

## B. Log-in Phase:

Date samples were logged-in:

3/30/94

By (print)

CHRIS SCHERPPE

(sign)

Chris Scherpp

11. Describe type of packing in cooler: WET FIFTY LITER - REAL MESSY
12. Were all bottles sealed in separate plastic bags? ☒ Yes ☐ No
13. Did all bottles arrive unbroken & were labels in good condition? ☒ Yes ☐ No
14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? ☒ Yes ☐ No
15. Did all bottle labels agree with custody papers? VERIFIED BY NOPS ON COC FROM EXPORT ☐ Yes ☒ No
16. Were correct containers used for the test indicated? ☒ Yes ☐ No
17. Were correct preservatives added to samples? ☒ Yes ☐ No
18. Was a sufficient amount of sample sent for tests indicated? ☒ Yes ☐ No
19. Were bubbles absent in volatile samples? N/A ☐ Yes ☐ No  
If NO, list by sample number: \_\_\_\_\_
20. Was the project manager called and status discussed? ☒ Yes ☐ No  
If yes, give details on the back of this form.
21. Who was called? CARRIE SMITH By whom? C. SCHERPPE Date: 3/30/94



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

ITAS-EXPORT  
IT CORPORATION  
5103 OLD WILLIAM PENN HWY.  
EXPORT, PENN. 15632  
CARRIE SMITH

Date: 04/19/94

Work Order: B4-04-049

P.O. Number: E94-039

This is the Certificate of Analysis for the following samples:

Client Work ID: FORT STORY 519029/SDG FS002 3I4610  
Date Received: 04/05/94  
Number of Samples: 20  
Sample Type: EXTRACT

### I. Introduction

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
032294-05A	Q403276-01 B4-04-049-01
032294-47C	Q403276-02 B4-04-049-02
032294-15A	Q403276-03 B4-04-049-03
032294-57C	Q403276-04 B4-04-049-04
032294-77D	Q403276-05 B4-04-049-05
032294-62C	Q403276-06 B4-04-049-06
032294-30B DUP	Q403276-07 B4-04-049-07
032294-114F	Q403276-08 B4-04-049-08
032294-30B	Q403276-09 B4-04-049-09
032294-94E	Q403276-10 B4-04-049-10
032294-89E	Q403276-11 B4-04-049-11
032294-35B	Q403276-12 B4-04-049-12
032294-72D	Q403276-13 B4-04-049-13

Reviewed and Approved

  
Jon Bartell

Laboratory Director

American Council of Independent Laboratories  
International Association of Environmental Testing Laboratories  
American Association for Laboratory Accreditation

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

Samples, continued from above:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
032294-99E	Q403276-14 B4-04-049-14
032294-10A	Q403276-15 B4-04-049-15
032294-119F	Q403276-16 B4-04-049-16
032294-119F MS	Q403276-16 B4-04-049-17
032294-119F MSD	Q403276-16 B4-04-049-18
BLANK	Q403276 B4-04-049-19
BLANK SPIKE	Q403276 B4-04-049-20

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.



Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-05A Q403276-01

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	70	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*
- \* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-47C Q403276-02

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	55	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	111

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-15A Q403276-03

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	38	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	89

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-57C Q403276-04

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)		1	44		1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	97

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-77D

Q403276-05

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	25	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	86

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-62C Q403276-06

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

Test Name	Note Ref	Result	Reporting		Date Analyzed	Method Reference
			Limit	Units		
TPH-D by GC (EPA8015_MOD)	1	46	1.9	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*
- \* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-30B DUP Q403276-07

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	61	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	89

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-114F Q403276-08

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	70	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	123



Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-30B Q403276-09

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	85	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-94E Q403276-10

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	78	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	77

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-89E

Q403276-11

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	85	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	120

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-35B Q403276-12

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	40	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	139

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-72D Q403276-13

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	35	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	102

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-99E Q403276-14

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	35	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	101

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-10A Q403276-15

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	26	1.7	mg/kg	04/09/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	93

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-119F Q403276-16

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	800	33	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.



Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 314610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-119F MS Q403276-16

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	12000		% Rec	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: 032294-119F MSD Q403276-16

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	9900		% Rec	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate diluted out.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: BLANK Q403276

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	7.3	1.7	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	136

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-049

SAMPLE ID: BLANK SPIKE Q403276

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	130		% Rec	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	109

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS002 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-049

#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable	EPA Methods 3510/3520/3550/3580 for extraction of
Petroleum	samples and modified EPA Method 8015 for GC/FID
Hydrocarbons	analysis of extracts run against a diesel standard.



# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. **484146**  
Page 1 of **2**

Project Name/No. **1 Fort Stary 519029**  
Sample Team Members **2**  
Profit Center No. **3 4610**  
Project Manager **4 Carrie Smith**  
Purchase Order No. **6 F94-039**  
Required Report Date **11 4/6/94 \***

Samples Shipment Date **7 4/4/94**  
Lab Destination **8 JAS Austin**  
Lab Contact **9 Chris Schuphoff**  
Project Contact/Phone **12 412-731-8806**  
Carrier/Waybill No. **13 FedEx 2423805967**

Bill to: **5 JAS PTH**  
Report to: **10 JAS PTH**

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
05A-032294	Ext Q403276-01	3/24/94	Glass/Vial	1ml	-	DIESEL	Comp 4°C	
47C-		02					4/5/94	
15A-		03						
57C-		04						
77D-		05						
62C-		06						
30B DUP-		07						
114F-		08						

Special Instructions: **23 SDG F5002 \* Chris Schuphoff to fax results ASAP**

Possible Hazard Identification: **24**

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: **25**

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: **26**

Normal ☐ Rush ☐

QC Level: **27**

I. ☐ II. ☐ III. ☐

Project Specific (specify):

1. Relinquished by **28**

(Signature/Affiliation)

Date: **4/4/94**  
Time: **1700**

1. Received by **28**

(Signature/Affiliation)

Date: **4/5/94**  
Time: **0925**

2. Relinquished by

(Signature/Affiliation)

Date:  
Time:

2. Received by  
(Signature/Affiliation)

Date:  
Time:

3. Relinquished by

(Signature/Affiliation)

Date:  
Time:

3. Received by  
(Signature/Affiliation)

Date:  
Time:

Comments: **29**

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



B404049

Reference Document No. <sup>30</sup> 989146  
Page 2 of 2

Project Name PLA 2024

Project No. 519029

Samples Shipment Date 9/9/99

## ONE CONTAINER PER LINE

Sample Number	Sample 15 Description/Type	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre- servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal 22 Record No.
30B-032294	Evt Q403276-09	3/24/94	Glass Vial	1ml	-	DISEL	Good 4C	
94E-	10						4/5/94 BC	LAR
89E-	11							USE ONLY
35B-	12							LAR
72D-	13							USE ONLY
99E-	14							LAR
10A-	15							USE ONLY
119F-	16							LAR
119F-	MSP 16							USE ONLY
Blank 3/24/94	Q403276							LAR
Blank Spike 3/24/94	Q403276							USE ONLY
								Bf 4/4/94

**\*See back of form for special instructions**



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

ITAS-EXPORT  
IT CORPORATION  
5103 OLD WILLIAM PENN HWY.  
EXPORT, PENN. 15632  
CARRIE SMITH

Date: 04/19/94

Work Order: B4-04-047

P.O. Number: E94-039

This is the Certificate of Analysis for the following samples:

Client Work ID: FORT STORY 519029/SDG FS001 3I4610  
Date Received: 04/05/94  
Number of Samples: 20  
Sample Type: EXTRACT

### I. Introduction

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
032294-20A	Q403275-01 B4-04-047-01
032294-67D	Q403275-02 B4-04-047-02
032294-25B	Q403275-03 B4-04-047-03
032294-64D	Q403275-04 B4-04-047-04
032294-22B	Q403275-05 B4-04-047-05
032294-52C	Q403275-06 B4-04-047-06
032294-106F	Q403275-07 B4-04-047-07
032294-104E	Q403275-08 B4-04-047-08
032294-109F	Q403275-09 B4-04-047-09
032294-01A	Q403275-10 B4-04-047-10
032294-43C	Q403275-11 B4-04-047-11
032294-85E	Q403275-12 B4-04-047-12
032294-40B	Q403275-13 B4-04-047-13

Reviewed and Approved

Jon Bartell

Laboratory Director

American Council of Independent Laboratories  
International Association of Environmental Testing Laboratories  
American Association for Laboratory Accreditation



Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-047

Samples, continued from above:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
032294-124F Q403275-14	B4-04-047-14
032294-82D Q403275-15	B4-04-047-15
032294-82D DUPQ403275-16	B4-04-047-16
032294-20A MSDQ403275-17	B4-04-047-17
032294-20A MS Q403275-18	B4-04-047-18
BLANK Q403275	B4-04-047-19
BLANK SPIKE Q403275	B4-04-047-20

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-20A Q403275-01

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	46	1.7	mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	92

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-67D Q403275-02

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	33	1.7	mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	78

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-25B Q403275-03

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	28	1.7	mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	99

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-64D Q403275-04

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	22	1.7	mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	110

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-04-047

SAMPLE ID: 032294-22B Q403275-05

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	31	1.9	mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	124

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-52C Q403275-06

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)		1	74		1.7	mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	100

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES  
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(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-106F Q403275-07

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	40	1.7 mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	104



Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-104E Q403275-08

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	53	1.7 mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	112

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-109F Q403275-09

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	41	1.7	mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

- |   |                |            |
|---|----------------|------------|
| 1 | Surrogate      | Recovery % |
|   | Benzo(a)pyrene | 115        |

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-01A Q403275-10

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	35	1.7	mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	107

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-43C Q403275-11

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	21	1.7 mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	105

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
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(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-85E Q403275-12

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	33	1.7 mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	130

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
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(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-40B Q403275-13

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	25	1.7 mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	101

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-124F Q403275-14

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	150	1.7	mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
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Work Order: B4-04-047

SAMPLE ID: 032294-82D Q403275-15

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	140	1.7 mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	114



Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES  
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Work Order: B4-04-047

SAMPLE ID: 032294-82D DUPQ403275-16

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	140	1.7 mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-20A MSDQ403275-17

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	370		% Rec	04/08/94	EPA8015_MOD

Referenced notes for these results:

- Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: 032294-20A MS Q403275-18

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	270		% Rec	04/08/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-047

SAMPLE ID: BLANK Q403275

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)		1	7.2		1.7	mg/kg	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	112

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684  
Work Order: B4-04-047

SAMPLE ID: BLANK SPIKE Q403275

SAMPLE DATE: 03/24/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	120		% Rec	04/08/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	107

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS001 314610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-047

#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable Petroleum Hydrocarbons	EPA Methods 3510/3520/3550/3580 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against a diesel standard.
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INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. 484145  
Page 1 of 2

Project Name/No. 1 FERS 519029  
Sample Team Members 2  
Profit Center No. 3 4610  
Project Manager 4 Carrie Smith  
Purchase Order No. 6 FRY-039  
Required Report Date 11 4/6/94 \*

Samples Shipment Date 7 4/4/94  
Lab Destination 8 FAS Austin  
Lab Contact 9 Chris Schupcoff  
Project Contact/Phone 12 412-731-8806  
Carrier/Waybill No. 13 FedEx 2423805964

Bill to: 5 FAS PTH  
Report to: 10 FAS PTH

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
20A-032294	EXT QY0325-01	EXTRACTED 3/24/94	Glass Vial	1ml	—	DIESEL	6000 4°C	
67D-		02						
25B-		03						
64D-		04						
22B-		05						
52C-		06						
106F		07						
104E-	✓	✓ 08	✓	✓	✓	✓	✓	

Special Instructions: 23 SDG F5001 \* Chris Schupcoff to fax results ASAP

Possible Hazard Identification: 24

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: 25

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: 26

Normal ☐ Rush ☒

QC Level: 27

I. ☐ II. ☐ III. ☐

Project Specific (specify):

1. Relinquished by 28 Bob Finlay FAS

(Signature/Affiliation)

Date: 4/4/94  
Time: 1700

1. Received by 28 B.C. IT

(Signature/Affiliation)

Date: 4/5/94  
Time: 0925

2. Relinquished by

(Signature/Affiliation)

Date:  
Time:

2. Received by

(Signature/Affiliation)

Date:  
Time:

3. Relinquished by

(Signature/Affiliation)

Date:  
Time:

3. Received by

(Signature/Affiliation)

Date:  
Time:

Comments: 29

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



B404047

484145

Page 2 of 2

Fort Story

519029

4/4/94

**ONE CONTAINER PER LINE**

[illegible]

\*See back of form for special instructions





INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

ITAS-EXPORT  
IT CORPORATION  
5103 OLD WILLIAM PENN HWY.  
EXPORT, PENN. 15632  
CARRIE SMITH

Date: 04/19/94

Work Order: B4-04-051

P.O. Number: E94-039

This is the Certificate of Analysis for the following samples:

Client Work ID: FORT STORY 519029/SDG FS006 3I4610  
Date Received: 04/05/94  
Number of Samples: 20  
Sample Type: EXTRACT

### I. Introduction

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
032494-400B	Q403322-01 B4-04-051-01
032494-442D	Q403322-02 B4-04-051-02
032494-403B	Q403322-03 B4-04-051-03
032494-445D	Q403322-04 B4-04-051-04
032494-487F	Q403322-05 B4-04-051-05
032494-398A	Q403322-06 B4-04-051-06
032494-482E	Q403322-07 B4-04-051-07
032494-484F	Q403322-08 B4-04-051-08
032494-379A	Q403322-09 B4-04-051-09
032494-421C	Q403322-10 B4-04-051-10
032494-418B	Q403322-11 B4-04-051-11
032494-383A	Q403322-12 B4-04-051-12
032494-425C	Q403322-13 B4-04-051-13

Reviewed and Approved:

  
Jon Bartell

Laboratory Director

American Council of Independent Laboratories  
International Association of Environmental Testing Laboratories  
American Association for Laboratory Accreditation

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

Samples, continued from above:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
032494-463E	Q403322-14 B4-04-051-14
032494-467E	Q403322-15 B4-04-051-15
032494-460D	Q403322-16 B4-04-051-16
032494-460D MSD	Q403322-16 B4-04-051-17
032494-460D MS	Q403322-16 B4-04-051-18
BLANK	Q403322 B4-04-051-19
BLANK SPIKE	Q403322 B4-04-051-20

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-400B Q403322-01

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)		1	56		1.7	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-442D Q403322-02

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	60	1.9 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	71

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-403B Q403322-03

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)		1	39		1.7	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	58

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-445D Q403322-04

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Result</u>	<u>Reporting</u>	<u>Date</u>	<u>Method</u>
	<u>Ref</u>		<u>Limit</u> <u>Units</u>	<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	25	1.9 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	73

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-487F Q403322-05

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	74	1.8 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	75

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
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Work Order: B4-04-051

SAMPLE ID: 032494-398A Q403322-06

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)		1	18		1.7	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	19



Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-482E Q403322-07

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	15	1.9 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	100

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-484F Q403322-08

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	9.4	1.7 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	39

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-379A Q403322-09

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	190	1.7 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-421C Q403322-10

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)		1	380		1.7	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-418B Q403322-11

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	260	1.7 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-383A Q403322-12

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	34	1.7 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	50

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-425C Q403322-13

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	110	1.7 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-463E Q403322-14

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	61	1.7 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	47



Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-467E Q403322-15

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	89	1.7 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	65

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-460D Q403322-16

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	*		mg/kg	04/19/94	EPA8015_MOD

Referenced notes for these results:

- 1 \* Extract received dry. Unable to analyze.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-460D MSD Q403322-16

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	1700		% Rec	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	75

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: 032494-460D MS Q403322-16

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	1300		% Rec	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	53

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: BLANK Q403322

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)		1	22		1.7	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-051

SAMPLE ID: BLANK SPIKE Q403322

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)		1	130			% Rec	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	35

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Company: ITAS-EXPORT

Date: 04/19/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

Work Order: B4-04-051

---

#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable  
Petroleum  
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of  
samples and modified EPA Method 8015 for GC/FID  
analysis of extracts run against a diesel standard.



# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. 481144  
Page 1 of 2

Project Name/No. 1 FORT STARY 519029  
Sample Team Members 2  
Profit Center No. 3 4610  
Project Manager 4 Carrie Smith  
Purchase Order No. 6 E94-039  
Required Report Date 11 4/8/94

Samples Shipment Date 7 4/4/94  
Lab Destination 8 ITAS AUSTIN  
Lab Contact 9 Chris Schycoff  
Project Contact/Phone 12 412-731-8806  
Carrier/Waybill No. 13 FEDX 2423805964

Bill to: 5 ITAS PTH

Report to: 10 ITAS PTH

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
400B-032494	EXTRACT <u>Q403322-01</u>	EXTRACTED <u>3/30/94</u>	Glass Vial	1ml	-	DIESEL	Good 40°C	
4420-032494	<u>Q403322-02</u>						4/5	
403B-		03						
445D-		04						
487F-		05						
398A-		06						
482E-		07						
484F- ✓	✓	08	✓	✓	✓	✓	✓	

Special Instructions: 23 SDG FSC06 \* Chris Schycoff to fax results

Possible Hazard Identification: 24

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: 25

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: 26

Normal ☐ Rush ☐

QC Level: 27

I. ☐ II. ☐ III. ☐

Project Specific (specify): \_\_\_\_\_

1. Relinquished by 28 Bob [Signature]

(Signature/Affiliation)

Date: 4/4/94  
Time: 1700

1. Received by 28 J.C.G.

(Signature/Affiliation)

Date: 4/5/94  
Time: 0925

2. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Comments: 29

ONE MORE SAMPLE IS TO BE SENT FOR THIS S.S

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.





INTERNATIONAL  
TECHNOLOGY  
CORPORATION

B404051  
**ANALYSIS REQUEST AND  
CHAIN OF CUSTODY RECORD (cont.)\***

Reference Document No. <sup>30</sup> 484/44  
Page 2 of 2

Project Name FORT STORY

Project No. 519029

Samples Shipment Date 4/4/94

**ONE CONTAINER PER LINE**

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
379A-032494	EXTRACT Q403322-09	3/30/94	Glass Vial	1ml	-	DIESEL	Good 4°C	
421C-		10					4/5/94	
418B-		11						
383A-		12						
425C-		13						
463E-		14						
467E-		15						
460D- <sup>+MS</sup> MSD	Y	Y	16	Y	Y	3X	Y	Y
460D-BF								
460D 4/4/94								
BLANK 3/30/94	EXTRACT Q403322	3/30/94	Glass Vial	1ml	-	DIESEL	Good 4°C	
BLANK SPIKE 3/30/94	Y Q403322	3/30/94	Y	Y	Y	Y	4/5/94	
*See back of form for special instructions.								
BF 4/4/94								

White: To accompany samples

Yellow: Field copy

\*See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

ITAS-EXPORT  
IT CORPORATION  
5103 OLD WILLIAM PENN HWY.  
EXPORT, PENN. 15632  
CARRIE SMITH

Date: 04/23/94

Work Order: B4-04-092

P.O. Number: E94-040

This is the Certificate of Analysis for the following samples:

Client Work ID: FORT STORY 519029/SDG FS006 3I4610  
Date Received: 04/07/94  
Number of Samples: 3  
Sample Type: EXTRACT

### I. Introduction

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
502F-032494 Q403322-17	B4-04-092-01
BLANK Q403322	B4-04-092-02
BLANK SPIKE Q403322	B4-04-092-03

Reviewed and Approved:

  
Jon Bartell

Laboratory Director

American Council of Independent Laboratories  
International Association of Environmental Testing Laboratories  
American Association for Laboratory Accreditation

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4-10

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-092

---

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-092

SAMPLE ID: 502F-032494 Q403322-17

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	56	1.7	mg/kg	04/14/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	73

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-092

SAMPLE ID: BLANK Q403322

SAMPLE DATE:

SAMPLE MATRIX: EXTRACT

Test Name	Note Ref	Result	Reporting Limit Units	Date Analyzed	Method Reference
TPH-D by GC (EPA8015_MOD)	1	11	1.7 mg/kg	04/14/94	EPA8015_MOD

Referenced notes for these results:

- |   |                             |                  |
|---|-----------------------------|------------------|
| 1 | Surrogate<br>Benzo(a)pyrene | Recovery %<br>87 |
|---|-----------------------------|------------------|

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-092

SAMPLE ID: BLANK SPIKE Q403322

SAMPLE DATE:

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	130		% Rec	04/14/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	86

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS006 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-092

---

#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable	EPA Methods 3510/3520/3550/3580 for extraction of
Petroleum	samples and modified EPA Method 8015 for GC/FID
Hydrocarbons	analysis of extracts run against a diesel standard.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

B404092

Reference Document No. 484150

Page 1 of 2

Project Name/No. <sup>1</sup> FORT STORY S19029

Samples Shipment Date <sup>7</sup> 4/6/94

Bill to: <sup>5</sup> ITAS Pitt

Sample Team Members <sup>2</sup>

Lab Destination <sup>8</sup> ITAS Austin

Profit Center No. <sup>3</sup> 4610

Lab Contact <sup>9</sup> Chris Schepcoff

Project Manager <sup>4</sup> Carrie Lynn Smith Gamber

Project Contact/Phone <sup>12</sup> 412-731-8806

Purchase Order No. <sup>6</sup> E94-040

Carrier/Waybill No. <sup>13</sup> FedEx 2423806104

Report to: <sup>10</sup> ITAS Pitt

Attn: Carrie Lynn Smith Gamber

Required Report Date <sup>11</sup> ASAP 4/12/94

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
* 502F-032494	EXT Q403322-17	4/5/94	Glass Vial	1ml	-	Diesel	Good 1°C ice 4-7-94	
Blank Q403358	EXT Q403358						FOR LAB USE ONLY	
Blank Q403322	EXT Q403322							
Blank Spike Q403358	EXT Q403322							
630F-32894	Q403358-01							
588D-32894	02						FOR LAB USE ONLY	
588D DUP-32894	03							
546B-32894	04							
591E-32894	05							

Special Instructions: <sup>23</sup> Chris Schepcoff to fax results ASAP

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☐ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☐ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐

Project Specific (specify): \_\_\_\_\_

1. Relinquished by <sup>28</sup> Bob Penley ITAS

Date: 4/6/94  
Time: 1610

1. Received by <sup>28</sup> Louis Chud IT

Date: 4-7-94  
Time: 0920

2. Relinquished by  
(Signature/Affiliation)

Date:  
Time:

2. Received by  
(Signature/Affiliation)

Date:  
Time:

3. Relinquished by  
(Signature/Affiliation)

Date:  
Time:

3. Received by  
(Signature/Affiliation)

Date:  
Time:

Comments: <sup>29</sup> \* This is the remaining sample from SDG F5006 - REMAINDER OF SAMPLES ARE SDG F5008

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.





## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No. <sup>30</sup> 489150  
Page 2 of 2

Project Name **FORT STORY**

Project No. 519029

Samples Shipment Date 4/6/94

EX-1490

## ONE CONTAINER PER LINE

[illegible]

White: To accompany samples

Yellow: Field copy

**\*See back of form for special instructions**

**CERTIFICATE OF ANALYSIS**

IT Corporation/Fort Story  
2790 Mosside Boulevard  
Monroeville, PA 15146  
Attn: Tom Mathison

April 28, 1994

Job Number: Q403321/322/358 Revision 2

The Certificate of Analysis is for the following:

Client Project ID: 519029  
Date Received by Lab: 03/25 and 30/94  
Number of Samples: Twenty-six  
Sample Type: Soil

**1.0 Introduction**

On March 25 and 30, 1994, twenty-six samples were received at ITAS Pittsburgh, labeled as follows:

450D-032494	497F-032494	430C DUP-032494	546B-32894
492F-032494	413B-032494	408B-032494	591E-32894
393A-032494	388A-032494	502F-032494	549C-32894
435C-032494	455D-032494	630F-32894	507A-32894
440C-032494	455D DUP-032494	588D-32894	626F-32894
477E-032494	472E-032494	588D DUP-32894	596E-32894
477E DUP-032494	430C-032494		

The analysis for TPH-diesel was performed at our ITAS laboratory in Austin, Texas. These results are enclosed.

Reviewed and Approved:

  
Carrie L. Smith-Gamber, Project Manager



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

ITAS-EXPORT  
IT CORPORATION  
5103 OLD WILLIAM PENN HWY.  
EXPORT, PENN. 15632  
CARRIE SMITH

Date: 04/23/94

Work Order: B4-04-093

P.O. Number: E94-040

This is the Certificate of Analysis for the following samples:

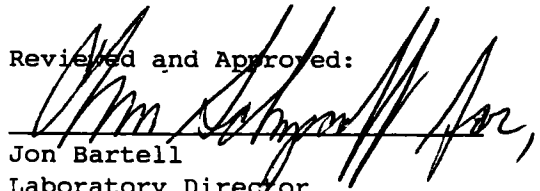
Client Work ID: FORT STORY 519029/SDG FS008 3I4610  
Date Received: 04/07/94  
Number of Samples: 13  
Sample Type: EXTRACT

### I. Introduction

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
630F-32894 Q403358-01	B4-04-093-01
588D-32894 Q403358-02	B4-04-093-02
588DDUP-32894 Q403358-03	B4-04-093-03
546B-32894 Q403358-04	B4-04-093-04
591E-32894 Q403358-05	B4-04-093-05
549C-32894 Q403358-06	B4-04-093-06
507A-32894 Q403358-07	B4-04-093-07
626F-32894 Q403358-08	B4-04-093-08
596E-32894 Q403358-09	B4-04-093-09
596E-32894 MATRIX SPIKE	B4-04-093-10
596E-32894 MSD	B4-04-093-11
BLANK Q403358	B4-04-093-12
BLANK SPIKE Q403358	B4-04-093-13

Reviewed and Approved:

  
Jon Bartell

Laboratory Director

American Council of Independent Laboratories  
International Association of Environmental Testing Laboratories  
American Association for Laboratory Accreditation

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

---

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 630F-32894 Q403358-01

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	330	1.7	mg/kg	04/14/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	117

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 588D-32894 Q403358-02

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	120	1.8	mg/kg	04/14/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	131

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 588DDUP-32894 Q403358-03

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	100	1.8 mg/kg	04/14/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	80

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 546B-32894 Q403358-04

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	450	2.3 mg/kg	04/14/94	EPA8015_MOD

Referenced notes for these results:

- Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.



Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

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(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 591E-32894 Q403358-05

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	160	1.9 mg/kg	04/14/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	90

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 549C-32894 Q403358-06

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	93	1.8 mg/kg	04/14/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	111

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 507A-32894 Q403358-07

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	590	20 mg/kg	04/15/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	83

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 626F-32894 Q403358-08

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	6.3	1.7 mg/kg	04/15/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	78

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 596E-32894 Q403358-09

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	290	1.8	mg/kg	04/14/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 596E-32894 MATRIX SPIKE

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	4000		% Rec	04/14/94	EPA8015_MOD

Referenced notes for these results:

- Surrogate Recovery %

Benzo(a)pyrene 140

Surrogate biased high due to matrix interference.

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: 596E-32894 MSD

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)		1	4600			% Rec	04/14/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene 137  
Surrogate biased high due to matrix interference.

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: BLANK Q403358

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	11	1.7 mg/kg	04/14/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	87



Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

SAMPLE ID: BLANK SPIKE Q403358

SAMPLE DATE: 04/05/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	130		% Rec	04/14/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	86

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS008 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-093

---

#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable  
Petroleum  
Hydrocarbons

EPA Methods 3510/3520/3550/3580 for extraction of  
samples and modified EPA Method 8015 for GC/FID  
analysis of extracts run against a diesel standard.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. 184150  
Page 1 of 2

Project Name/No. 1 FORT STORY 519029 Samples Shipment Date 7 4/6/94 Bill to: 5 ITAS Pitt  
Sample Team Members 2 Lab Destination 8 ITAS Austin  
Profit Center No. 3 4610 Lab Contact 9 Chris Schepcoff  
Project Manager 4 Carrie Lynn Smith Gamber Project Contact/Phone 12 412-731-8816 Report to: 10 ITAS Pitt  
Purchase Order No. 6 E94-040 Carrier/Waybill No. 13 FedEx 2423806104 Attn: Carrie Lynn Smith Gamber  
Required Report Date 11 ASAP 4/12/94

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
* 502F-032494	EET Q403322-17	4/5/94	Glass Vial	1ml	-	Diesel	Good 1°C ice 4-7-94	
Blank Q403358 Q403322	EET Q403358 Q403322						FOR LAB USE ONLY	
Blank Spike Q403358 Q403322	EET Q403358 Q403322							
630F-32894	Q403358-01							
588D-32894	02						FOR LAB USE ONLY	
588D DUP-32894	03							
546B-32894	04							
591E-32894	05							

Special Instructions: <sup>23</sup> Chris Schepcoff to fax results ASAP

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☐ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☐ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐

Project Specific (specify):

1. Relinquished by <sup>28</sup>  
(Signature/Affiliation)

Date: 4/6/94  
Time: 1610

1. Received by <sup>28</sup>  
(Signature/Affiliation)

Date: 4-7-94  
Time: 0920

2. Relinquished by  
(Signature/Affiliation)

Date:  
Time:

2. Received by  
(Signature/Affiliation)

Date:  
Time:

3. Relinquished by  
(Signature/Affiliation)

Date:  
Time:

3. Received by  
(Signature/Affiliation)

Date:  
Time:

Comments: <sup>29</sup> \* This is the remaining sample from SDG F5006 - REMAINDER OF SAMPLES  
ARE SDG F5008

Write: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

**ANALYSIS REQUEST AND  
CHAIN OF CUSTODY RECORD (cont.)\***

B404093

Reference Document No.<sup>30</sup> 484150

Page 2 of 2

Project Name FORT STORY

Project No. 519029

Samples Shipment Date 4/6/94

~~EXT 1490~~

**ONE CONTAINER PER LINE**

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
549C-32894	EXT 040358-06	4/5/94	Glass Vial	1ml	~	DIESEL	Good 1 <sup>st</sup> ice 4-7-94	
507A-32894	07							
626F-32894	08							
596E-32894 ms	09							
596E-32894 ms	09							
596E-32894	09							

BF 4/6/94

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYTICAL SERVICES

## CERTIFICATE OF ANALYSIS

ITAS-EXPORT  
IT CORPORATION  
5103 OLD WILLIAM PENN HWY.  
EXPORT, PENN. 15632  
CARRIE SMITH

Date: 04/23/94

Work Order: B4-04-050

P.O. Number: E94-039

This is the Certificate of Analysis for the following samples:

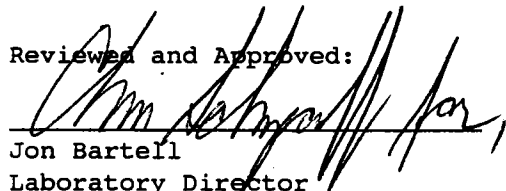
Client Work ID: FORT STORY 519029/SDG FS005 3I4610  
Date Received: 04/05/94  
Number of Samples: 20  
Sample Type: EXTRACT

### I. Introduction

Samples were labeled as follows:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
032494-450D	Q403321-01 B4-04-050-01
032494-492F	Q403321-02 B4-04-050-02
032494-393A	Q403321-03 B4-04-050-03
032494-435C	Q403321-04 B4-04-050-04
032494-440C	Q403321-05 B4-04-050-05
032494-477E	Q403321-06 B4-04-050-06
032494-477E DUP	Q403321-07 B4-04-050-07
032494-497F	Q403321-08 B4-04-050-08
032494-413B	Q403321-09 B4-04-050-09
032494-388A	Q403321-10 B4-04-050-10
032494-455D	Q403321-11 B4-04-050-11
032494-455D DUP	Q403321-12 B4-04-050-12
032494-472E	Q403321-13 B4-04-050-13

Reviewed and Approved:

  
Jon Bartell

Laboratory Director

American Council of Independent Laboratories  
International Association of Environmental Testing Laboratories  
American Association for Laboratory Accreditation

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

Samples, continued from above:

<u>SAMPLE IDENTIFICATION</u>	<u>LABORATORY #</u>
032494-430C Q403321-14	B4-04-050-14
032494-430C DUP Q403321-15	B4-04-050-15
032494-408B Q403321-16	B4-04-050-16
032494-408B MSD Q403321-16	B4-04-050-17
032494-408B MS Q403321-16	B4-04-050-18
BLANK Q403321	B4-04-050-19
BLANK SPIKE Q403321	B4-04-050-20

## II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

## III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-450D Q403321-01

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	38	2.0	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	87

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-492F Q403321-02

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	26	1.7	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	49



Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-393A Q403321-03

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	27	1.7 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	55

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-435C Q403321-04

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	34	1.7 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	55

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-440C Q403321-05

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	51	2.0 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	68

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-477E Q403321-06

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	620	9.4 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-477E DUP Q403321-07

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	1900	9.1 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-497F Q403321-08

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	64	1.7	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	50

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-413B Q403321-09

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	40	1.7 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-388A Q403321-10

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	310	8.8 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.



Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-455D Q403321-11

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	430	9.0 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-455D DUP Q403321-12

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	420	8.8	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- 1 Surrogate Recovery %  
Benzo(a)pyrene \*
- \* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-472E Q403321-13

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u> <u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	97	1.7 mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	71

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-430C Q403321-14

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	120	1.8	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	58

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-430C DUP Q403321-15

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	160	1.7	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	90

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-408B Q403321-16

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	87	1.7	mg/kg	04/11/94	EPA8015_MOD

Referenced notes for these results:

- Surrogate Recovery %  
Benzo(a)pyrene \*  
\* Surrogate not reported due to matrix interference.

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-408B MSD Q403321-16

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	1100		% Rec	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	68

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: 032494-408B MS Q403321-16

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u> <u>Ref</u>	<u>Result</u>	<u>Reporting</u> <u>Limit</u>	<u>Units</u>	<u>Date</u> <u>Analyzed</u>	<u>Method</u> <u>Reference</u>
TPH-D by GC (EPA8015_MOD)	1	1000		% Rec	04/11/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	70



Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES  
AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: BLANK Q403321

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)		1	7.7		1.7	mg/kg	04/15/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	43

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 314610

IT ANALYTICAL SERVICES  
AUSTIN, TX  
(512) 892-6684

Work Order: B4-04-050

SAMPLE ID: BLANK SPIKE Q403321

SAMPLE DATE: 03/30/94

SAMPLE MATRIX: EXTRACT

<u>Test Name</u>	<u>Note</u>	<u>Ref</u>	<u>Result</u>	<u>Reporting</u>	<u>Limit</u>	<u>Units</u>	<u>Date</u>	<u>Method</u>
							<u>Analyzed</u>	<u>Reference</u>
TPH-D by GC (EPA8015_MOD)		1	140			% Rec	04/15/94	EPA8015_MOD

Referenced notes for these results:

1	Surrogate	Recovery %
	Benzo(a)pyrene	27

Company: ITAS-EXPORT

Date: 04/23/94

Client Work ID: FORT STORY 519029/SDG FS005 3I4610

IT ANALYTICAL SERVICES

AUSTIN, TX

(512) 892-6684

Work Order: B4-04-050

#### IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME TPH-D by GC (EPA8015\_MOD) TEST CODE TPH\_GC

TPH-Extractable	EPA Methods 3510/3520/3550/3580 for extraction of
Petroleum	samples and modified EPA Method 8015 for GC/FID
Hydrocarbons	analysis of extracts run against a diesel standard.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

**ANALYSIS REQUEST AND  
CHAIN OF CUSTODY RECORD\***

B404050

Reference Document No. 494117

Page 1 of 2

Project Name/No. 1 Fort Story 519029 Samples Shipment Date 7 4/4/94  
Sample Team Members 2 Lab Destination 8 FAS Austin  
Profit Center No. 3 4610 Lab Contact 9 Chris Achpoff  
Project Manager 4 Carrie Smith Project Contact/Phone 12 412-731-8806  
Purchase Order No. 6 E94-039 Carrier/Waybill No. 13 FedEx 2385964  
Required Report Date 11 4/8/94 \*

Bill to: 5 FAS PTH

Report to: 10 FAS PTH

**ONE CONTAINER PER LINE**

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
450D -032494	EXT 0403321-01	3/30/94	Glass/Vial	1ml	-	DIESEL	Good 4°C	
492F-	02						4/5/94	
393A-	03							
435C-	04							
440C-	05							
477E-	06							
477E DUP-	07							
497F-	08							

Special Instructions: 23 SDG FS005 \* Chris Achpoff to fax unit ASAP

Possible Hazard Identification: 24

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: 25

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: 26

Normal ☐ Rush ☐

QC Level: 27

I. ☐ II. ☐ III. ☐

Project Specific (specify):

1. Relinquished by 28 Bob Taylor FAS PTH

(Signature/Affiliation)

Date: 4/4/94  
Time: 1:00

1. Received by 29 B.C. Ch

(Signature/Affiliation)

Date: 4/5/94  
Time: 0925

2. Relinquished by

(Signature/Affiliation)

Date:  
Time:

2. Received by

(Signature/Affiliation)

Date:  
Time:

3. Relinquished by

(Signature/Affiliation)

Date:  
Time:

3. Received by

(Signature/Affiliation)

Date:  
Time:

Comments: 29

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.) \*

BY04050

Reference Document No.<sup>30</sup> 484147

Page 2 of 2

Project Name Fast Story

Project No. 519029

Samples Shipment Date 4/4/94

## ONE CONTAINER PER LINE

[illegible]

White: To accompany samples

**Yellow: Field copy**

\*See back of form for special instructions

**SOLUTIONS LABORATORIES, INC.**

814 S GREENTRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**CHAIN-OF-CUSTODY REPORT**

SOLUTIONS LOG #: 04191993-010-01,02,03

COMPANY NAME: I T CORPORATION  
PROJECT MANAGER: TOM MATHISON  
BILLING ADDRESS: 2790 MOSSIDE BLVD  
MONROEVILLE, PA 15146  
TELEPHONE #: (412) 372-7701  
FAX #:  
P.O.#: FORT STORY #519029

DATE/TIME RECEIVED: 04/19/93; 1728  
SAMPLER: JACK BOHERG

SAMPLE ID	FIELD SAMPLE ID	SAMPLED DATE	SAMPLED TIME	# OF CONT.	CONTAINER	LOCATION	PRESERV.	MATRIX
01A1	519029505	04/19/93	1120	1	40 ML VOA	FORT STORY	NONE	SOIL
02A1	519029506	04/19/93	1140	1	40 ML VOA	FORT STORY	NONE	SOIL
03A1	519029507	04/19/93	1200	1	40 ML VOA	FORT STORY	NONE	SOIL

SAMPLE ID	ANALYSIS TO BE PERFORMED	DUE DATE
01A1>03A1	PCBS	04/21/93

CONDITION OF SAMPLE: NOT PRESERVED

RECEIVED BY: L. PALAMBO

RELINQUISHED BY: JACK BOHERG

DATE: APRIL 21, 1993

I T CORPORATION  
ATTN: TOM MATHISON  
2790 MOSSIDE BLVD  
MONROEVILLE, PA 15146

PROJECT NAME: FORT STORY FTP  
PROJECT NUMBER: 519029

SOLUTIONS LOG: 04191993-010-01,02,03  
MATRIX: SOIL  
DATE/TIME SAMPLED: 04/19/93; 1120, 1140, 1200

METHOD 8080-PCB

CLIENT NO:	519029505	519029506	519029507	MDL*
LAB NO:	01A1	02A1	03A1	N/A
SAMPLE DATE:	04/19/93	04/19/93	04/19/93	N/A
RECEIVED DATE:	04/19/93	04/19/93	04/19/93	N/A
EXTRACTION DATE:	04/20/93	04/20/93	04/20/93	N/A
ANALYSIS DATE:	04/21/93	04/21/93	04/21/93	N/A
INSTRUMENT ID:	HP ECD	HP ECD	HP ECD	HP ECD
DILUTION FACTOR:	1	1	1	1
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg

COMPOUNDS

ALL AROCLORS	< 0.5	< 0.5	< 0.5	0.5
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\*MDL IS THE METHOD DETECTION LIMIT. THE MDL IS USED TO DETERMINE THE PRACTICAL QUANTITATIVE LIMIT FOR EACH MATRIX TYPE. THE MATRIX FACTOR IS TABLED ON PAGE 8080-3 OF SW-846.

REVIEWED BY:

*Dorothy S. Small*  
DOROTHY S. SMALL

PAGE 2 OF 2

**SOLUTIONS LABORATORIES, INC.**

814 B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**CHAIN-OF-CUSTODY REPORT**

SOLUTIONS LOG #: 06071993-002-01 THRU 06

COMPANY NAME: I T CORPORATION  
PROJECT MANAGER: LOU BERNARDO  
BILLING ADDRESS: TDY INN  
15910 WARWICK BOULEVARD  
NEWPORT NEWS, VA 23602

TELEPHONE #: 1-888-6102

FAX #:

P.O.#: 474960

DATE/TIME RECEIVED: 06/07/93; 1320

SAMPLER: RICK SCHROPP

SAMPLE ID	FIELD SAMPLE ID	SAMPLED DATE	SAMPLED TIME	# OF CONT.	CONTAINER	LOCATION	PRESERV.	MATRIX
01A1	A	06/07/93	11:00	1	40 ML VOA	FT. STORY	ICE	SOIL
02A1	B	06/07/93	11:23	1	40 ML VOA	FT. STORY	ICE	SOIL
03A1	C	06/07/93	12:00	1	40 ML VOA	FT. STORY	ICE	SOIL
04A1	D	06/07/93	12:20	1	40 ML VOA	FT. STORY	ICE	SOIL
05A1	E	06/07/93	12:30	1	40 ML VOA	FT. STORY	ICE	SOIL
06A1	F	06/07/93	12:45	1	40 ML VOA	FT. STORY	ICE	SOIL

SAMPLE ID	ANALYSIS TO BE PERFORMED	DUE DATE
01A1>06A1	TPH 8015	06/08/93

CONDITION OF SAMPLE: GOOD

RECEIVED BY: JO ANN FEROLINO

RELINQUISHED BY: RICK SCHROPP



**SOLUTIONS LABORATORIES, INC.**

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**REPORT OF ANALYSIS**

DATE: JUNE 8, 1993

I T CORPORATION  
ATTN: LOU BERNARDO  
2790 MOSSIDE BLVD  
MONROEVILLE, PA 15146

PROJECT NAME: FORT STORY  
PROJECT NUMBER: 519029  
P.O. #: 474960

SOLUTIONS LOG: 06071993-002-01 THRU 06

MATRIX: SOIL

DATE/TIME SAMPLED: 06/07/93; 11:00, 11:23, 12:00, 12:20, 12:30, 12:45

**METHOD MODIFIED 8015**

CLIENT NO:	A	B	C	D
LAB NO:	01A1	02A1	03A1	04A1
SAMPLE DATE:	06/07/93	06/07/93	06/07/93	06/07/93
RECEIVED DATE:	06/07/93	06/07/93	06/07/93	06/07/93
DATE EXTRACTED:	06/07/93	06/07/93	06/07/93	06/07/93
ANALYSIS DATE:	06/07/93	06/07/93	06/07/93	06/07/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	1.0	1.0	1.0	1.0
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg
DET. LMT.	2.85	2.85	2.85	2.85

**ANALYSIS**

TOTAL PETROLEUM HYDROCARBONS	<2.85	< 2.85	< 2.85	< 2.85
TYPE	N/A	N/A	N/A	N/A

**SOLUTIONS LABORATORIES, INC.**

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**REPORT OF ANALYSIS**

DATE: JUNE 8, 1993

I T CORPORATION  
ATTN: LOU BERNARDO  
2790 MOSSIDE BLVD  
MONROEVILLE, PA 15146

PROJECT NAME: FORT STORY  
PROJECT NUMBER: 519029  
P.O. #: 474960

SOLUTIONS LOG: 06071993-002-01 THRU 06

MATRIX: SOIL

DATE/TIME SAMPLED: 06/07/93; 11:00, 11:23, 12:00, 12:20, 12:30, 12:45

**METHOD MODIFIED 8015**

CLIENT NO:	E	F
LAB NO:	05A1	06A1
SAMPLE DATE:	06/07/93	06/07/93
RECEIVED DATE:	06/07/93	06/07/93
DATE EXTRACTED:	06/07/93	06/07/93
ANALYSIS DATE:	06/07/93	06/07/93
INSTRUMENT ID:	HP/FID	HP/FID
DILUTION FACTOR:	1.0	1.0
UNITS:	mg/Kg	mg/Kg
DET. LMT.	2.85	2.85

**ANALYSIS**

---

TOTAL PETROLEUM		
HYDROCARBONS	77.6	3.16
TYPE	DIESEL	DIESEL

REVIEWED BY:

*Dorothy S. Small / ip*  
DOROTHY S. SMALL

[illegible]

**SOLUTIONS LABORATORIES, INC.**

814 B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**CHAIN-OF-CUSTODY REPORT**

\* AMENDED ON JULY 20, 1993.

SOLUTIONS LOG #: 07131993-006-01

COMPANY NAME: SOLUTIONS ENVIRONMENTAL ASSOCIATES

PROJECT MANAGER: AL DAVIS

BILLING ADDRESS: 814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320

TELEPHONE #: (804) 420-0467

FAX #: (804) 420-4204

P.O.#: N/A

DATE/TIME RECEIVED: 07/13/93; 2040

SAMPLER: GREG KISER

SAMPLE ID	FIELD SAMPLE ID	SAMPLED DATE	SAMPLED TIME	# OF CONT.	CONTAINER	LOCATION	PRESERV.	MATRIX
01A1	01	07/13/93	1815	1	250 ML AM	POOL-FT. STORY	NONE	SLUDGE

SAMPLE ID	ANALYSIS TO BE PERFORMED	DUE DATE
01A1	TOTAL LEAD (GFAA)	07/15/93
01A1	* TCLP 8 METALS, TCLP BENZENE, BENZENE	07/19/93

\* NEW ANALYSIS ADDED ON 07/15/93 PER AL DAVIS.

CONDITION OF SAMPLE: NOT PRESERVED

RECEIVED BY: M. RUTH GLOVER

RELINQUISHED BY: GREG KISER

# SOLUTIONS LABORATORIES, INC.

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

## REPORT OF ANALYSIS

DATE: JULY 20, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: FT. STORY  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 07131993-006-01  
MATRIX: SLUDGE  
DATE/TIME SAMPLED: 07/13/93; 1815

SOL LOG #	FIELD ID	ANALYSIS	RESULT	UNITS	D.F.	DET LT.	METHOD/DATE/TIME/ANALYST
01A1	01	TOTAL LEAD	99.0	mg/Kg	25	0.050	7421/07-14-93/1200/LP
01A1	01	TCLP ARSENIC	<0.002	mg/L	1	0.002	1311/7060/07-19-93/1320/LP
01A1	01	TCLP BARIUM	<0.150	mg/L	1	0.150	1311/7080/07-19-93/1130/LP
01A1	01	TCLP CADMIUM	0.060	mg/L	1	0.010	1311/7130/07-19-93/1230/LP
01A1	01	TCLP CHROMIUM	<0.033	mg/L	1	0.033	1311/7190/07-19-93/1250/LP
01A1	01	TCLP LEAD	3.07	mg/L	1	0.099	1311/7420/07-19-93/1150/LP
01A1	01	TCLP MERCURY	0.0008	mg/L	1	0.0002	1311/7470/07-19-93/1500/LP
01A1	01	TCLP SELENIUM	0.804	mg/L	1	0.002	1311/7740/07-19-93/1345/LP
01A1	01	TCLP SILVER	<0.016	mg/L	1	0.016	1311/7760/07-19-93/1100/LP

SOLUTIONS LABORATORIES, INC.

814 B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

CHAIN-OF-CUSTODY REPORT

SOLUTIONS LOG #: 07211993-002-01 THRU 14

COMPANY NAME: SOLUTIONS ENVIRONMENTAL ASSOCIATES

PROJECT MANAGER: AL DAVIS

BILLING ADDRESS: 814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320

TELEPHONE #: (804) 420-0467

FAX #: (804) 420-4204

P.O.#: N/A

DATE/TIME RECEIVED: 07/21/93; 1145

SAMPLER: A. C. DAVIS

SAMPLE ID	FIELD SAMPLE ID	SAMPLED DATE	SAMPLED TIME	# OF CONT.	CONTAINER	LOCATION	PRESERV.	MATRIX
01A1	721-1	07/21/93	0735	1	40 ML VOA	FT. STORY	ICE	SOIL
02A1	721-2	07/21/93	0745	1	40 ML VOA	FT. STORY	ICE	SOIL
03A1	721-3	07/21/93	0748	1	40 ML VOA	FT. STORY	ICE	SOIL
04A1	721-4	07/21/93	0758	1	40 ML VOA	FT. STORY	ICE	SOIL
05A1	721-5	07/21/93	0805	1	40 ML VOA	FT. STORY	ICE	SOIL
06A1	721-6	07/21/93	0814	1	40 ML VOA	FT. STORY	ICE	SOIL
07A1	721-7	07/21/93	0820	1	40 ML VOA	FT. STORY	ICE	SOIL
08A1	721-8	07/21/93	0822	1	40 ML VOA	FT. STORY	ICE	SOIL
09A1	721-9	07/21/93	0825	1	40 ML VOA	FT. STORY	ICE	SOIL
10A1	721-10	07/21/93	0837	1	40 ML VOA	FT. STORY	ICE	SOIL
11A1	721-11	07/21/93	0900	1	40 ML VOA	FT. STORY	ICE	SOIL
12A1	721-12	07/21/93	0914	1	40 ML VOA	FT. STORY	ICE	SOIL
13A1	721-13	07/21/93	0920	1	40 ML VOA	FT. STORY	ICE	SOIL
14A1	721-14	07/21/93	0907	1	40 ML VOA	FT. STORY	ICE	SOIL

SAMPLE ID	ANALYSIS TO BE PERFORMED	DUE DATE
01A1>14A1	TPH 3550/8015	07/26/93

CONDITION OF SAMPLE: GOOD

RECEIVED BY: J. DONAHUE

RELINQUISHED BY: DOROTHY S. SMALL

**SOLUTIONS LABORATORIES, INC.**

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**REPORT OF ANALYSIS**

DATE: JULY 27, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: LARC, FT. STORY  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 07211993-002-01 THRU 14  
MATRIX: SOIL

DATE/TIME SAMPLED: 07/21/93; 0735, 0745, 0748, 0758, 0805, 0814, 0820, 0822,  
0825, 0837, 0900, 0914, 0920, 0907

**METHOD 3550 MODIFIED 8015**

CLIENT NO:	721-1	721-2	721-3	721-4	721-5
LAB NO:	01A1	02A1	03A1	04A1	05A1
SAMPLE DATE:	07/21/93	07/21/93	07/21/93	07/21/93	07/21/93
RECEIVED DATE:	07/21/93	07/21/93	07/21/93	07/21/93	07/21/93
DATE EXTRACTED:	07/21/93	07/21/93	07/21/93	07/21/93	07/21/93
ANALYSIS DATE:	07/22/93	07/22/93	07/22/93	07/22/93	07/22/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

**ANALYSIS**

TOTAL PETROLEUM HYDROCARBONS	3.58	1.52	< 0.10	< 0.10	31.9
TYPE	M. OIL	M. OIL	N/A	N/A	M. OIL

SOLUTIONS LABORATORIES, INC.

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

REPORT OF ANALYSIS

DATE: JULY 20, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: FT. STORY  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 07131993-006-01  
MATRIX: SLUDGE  
DATE/TIME SAMPLED: 07/13/93; 1815

**METHOD BTEX 602**

CLIENT NO:	01	01	MDL*
LAB NO:	01A1, TCLP EXT	01A1, SLUDGE	N/A
SAMPLE DATE:	07/13/93	07/13/93	N/A
RECEIVED DATE:	07/13/93	07/13/93	N/A
EXTRACTION DATE:	07/15/93	N/A	N/A
ANALYSIS DATE:	07/19/93	07/19/93	N/A
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	1	1	1
UNITS:	ug/L	ug/Kg	ug/L

COMPOUNDS

BENZENE	3.50	< 2.0	0.2
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\*MDL IS THE METHOD DETECTION LIMIT.

REVIEWED BY:

*Dorothy S. Small*  
DOROTHY S. SMALL



**SOLUTIONS LABORATORIES, INC.**

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**REPORT OF ANALYSIS**

DATE: JULY 27, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: LARC, FT. STORY  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 07211993-002-01 THRU 14

MATRIX: SOIL

DATE/TIME SAMPLED: 07/21/93; 0735, 0745, 0748, 0758, 0805, 0814, 0820, 0822,  
0825, 0837, 0900, 0914, 0920, 0907

**METHOD 3550 MODIFIED 8015**

CLIENT NO:	721-6	721-7	721-8	721-9	721-10
LAB NO:	06A1	07A1	08A1	09A1	10A1
SAMPLE DATE:	07/21/93	07/21/93	07/21/93	07/21/93	07/21/93
RECEIVED DATE:	07/21/93	07/21/93	07/21/93	07/21/93	07/21/93
DATE EXTRACTED:	07/21/93	07/21/93	07/21/93	07/21/93	07/21/93
ANALYSIS DATE:	07/22/93	07/26/93	07/22/93	07/22/93	07/22/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

**ANALYSIS**

TOTAL PETROLEUM HYDROCARBONS	< 0.10	< 0.10	37.6	< 0.10	< 0.10
TYPE	N/A	N/A	M. OIL	N/A	N/A

**SOLUTIONS LABORATORIES, INC.**

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**REPORT OF ANALYSIS**

DATE: JULY 27, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: LARC, FT. STORY  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 07211993-002-01 THRU 14

MATRIX: SOIL

DATE/TIME SAMPLED: 07/21/93; 0735, 0745, 0748, 0758, 0805, 0814, 0820, 0822,  
0825, 0837, 0900, 0914, 0920, 0907

**METHOD 3550 MODIFIED 8015**

CLIENT NO:	721-11	721-12	721-13	721-14
LAB NO:	11A1	12A1	13A1	14A1
SAMPLE DATE:	07/21/93	07/21/93	07/21/93	07/21/93
RECEIVED DATE:	07/21/93	07/21/93	07/21/93	07/21/93
DATE EXTRACTED:	07/21/93	07/21/93	07/21/93	07/21/93
ANALYSIS DATE:	07/22/93	07/22/93	07/22/93	07/22/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg

**ANALYSIS**

TOTAL PETROLEUM HYDROCARBONS	90.9	14.7	1.41	< 0.10
TYPE	M. OIL	M. OIL	KEROSINE	N/A

REVIEWED BY:

*Dorothy S. Small*  
DOROTHY S. SMALL

SOLUTION OG #  
0721193-002  
COMPANY NAME:  
Sol. Environ.

Solutions Laboratories, Inc.  
814-B Greenbrier Circle  
Chesapeake, VA 23320  
(804) 420-0467/Fax 420-4204

# CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

## ANALYSIS REQUEST

PROJECT MANAGER: AL DAVIS PHONE: 422-8304 P.O.#

ADDRESS (Office) SITE LOCATION:  
Ft. Story

PROJECT NUMBER: PROJECT NAME:  
LARC

I Attest that the proper field sampling procedures were used during the collection of these samples. Sampler's Signature: A.C. Ari

FIELD ID	SOURCE OF SAMPLE	SOL LAB#:	# Containers	Container Size/Type	MATRIX						PRESERVATION						SAMPLING		
					Water	Soil	Air	Sludge	Liquid	Other	HCl	HNO3	H2SO4	NaOH	Ice	None	Other	Date	Time
721-1	189	01	1	4000A	✓										✓			7/2/93	0735
721-2	442	02	1	↓	✓										✓			↓	0745
721-3	568	03	1		✓											✓			0748
721-4	358	04	1		✓											✓			0758
721-5	272	05	1		✓											✓			0805
721-6	566	06	1		✓											✓			0814
721-7	104	07	1		✓											✓			0820
721-8	107	08	1		✓											✓			0822
721-9	233	09	1		✓											✓			0825
721-10	607	10	1		✓											✓			0837

RELINQUISHED BY SAMPLER:	DATE:	TIME:	RECEIVED BY:
			Dorothy Small
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
A.C. Ari	7/2/93	1145	J. I. Donahue

REMARKS/SPECIAL DETECTION LIMITS:

SPECIAL REPORT REQUIREMENTS:

FAX

CONTAINER TYPE KEY: GL=GLASS AM=AMBER PL=PLASTIC WM=WIDEMOUTH  
VOA= VOLATILE ORGANIC CONTAINER L=LITER 500=500 ML 250=250ML

SPECIAL HANDLING:

EXPEDITED 72 HR ☒ 48 HR ☐ 24 HR ☐ 12 HR ☐  
8 HR ☐ 4 HR ☐ HR ☐



**SOLUTIONS LABORATORIES, INC.**

814 B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**CHAIN-OF-CUSTODY REPORT**

SOLUTIONS LOG #: 07271993-004-01 THRU 16

COMPANY NAME: SOLUTIONS ENVIRONMENTAL ASSOCIATES

PROJECT MANAGER: D. SMALL

BILLING ADDRESS: 814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320

TELEPHONE #: (804) 420-0467

FAX #: (804) 420-4204

P.O.#: N/A

DATE/TIME RECEIVED: 07/27/93; 1700

SAMPLER: DOROTHY S. SMALL

SAMPLE ID	FIELD SAMPLE ID	SAMPLED DATE	SAMPLED TIME	# OF CONT.	CONTAINER	LOCATION	PRESERV.	MATRIX
01A1,A2	184-16-C-12	07/27/93	0930	2	40 ML VOA	FT. STORY	ICE	SOIL
02A1,A2	352-16-E-24	07/27/93	0935	2	40 ML VOA	FT. STORY	ICE	SOIL
03A1	531-16-B-48	07/27/93	0945	1	40 ML VOA	FT. STORY	ICE	SOIL
04A1	238-15-F-12	07/27/93	0950	1	40 ML VOA	FT. STORY	ICE	SOIL
05A1,A2	267-15-A-24	07/27/93	0956	2	40 ML VOA	FT. STORY	ICE	SOIL
06A1	393-15-A-36	07/27/93	1004	1	40 ML VOA	FT. STORY	ICE	SOIL
07A1,A2	155-14-B-12	07/27/93	1013	2	40 ML VOA	FT. STORY	ICE	SOIL
08A1,A2	350-14-E-24	07/27/93	1019	2	40 ML VOA	FT. STORY	ICE	SOIL
09A1	518-14-A-48	07/27/93	1025	1	40 ML VOA	FT. STORY	ICE	SOIL
10A1,A2	533-14-B-48	07/27/93	1030	2	40 ML VOA	FT. STORY	ICE	SOIL
11A1,A2	30-13-B-5	07/27/93	1034	2	40 ML VOA	FT. STORY	ICE	SOIL
12A1	223-13-E-12	07/27/93	1037	1	40 ML VOA	FT. STORY	ICE	SOIL
13A1,A2	475-13-E-36	07/27/93	1102	2	40 ML VOA	FT. STORY	ICE	SOIL
14A1,A2	601-13-E-38	07/27/93	1115	2	40 ML VOA	FT. STORY	ICE	SOIL
15A1	238	07/27/93	0950	1	40 ML VOA	FT. STORY	ICE	SOIL
16A1	18-D-5	07/27/93	1126	1	40 ML VOA	FT. STORY	ICE	SOIL

SAMPLE ID	ANALYSIS TO BE PERFORMED	DUE DATE
01A1>16A1	TPH 3550/8015	08/02/93

CONDITION OF SAMPLE: GOOD

RECEIVED BY: JULIE DONAHUE

RELINQUISHED BY: DOROTHY S. SMALL

SOLUTIONS LABORATORIES, INC.

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

REPORT OF ANALYSIS

DATE: AUGUST 2, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: LARC  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 07271993-004-01 THRU 16  
MATRIX: SOIL

DATE/TIME SAMPLED: 07/27/93; 0930, 0935, 0945, 0950, 0956, 1004, 1013, 1019,  
1025, 1030, 1034, 1037, 1102, 1115, 0950, 1126

**METHOD 3550 MODIFIED 8015**

CLIENT NO:	184-16-C-12	352-16-E-24	531-16-B-48	238-15-F-12	267-15-A-24
LAB NO:	01A1	02A1	03A1	04A1	05A1
SAMPLE DATE:	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
RECEIVED DATE:	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
DATE EXTRACTED:	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
ANALYSIS DATE:	07/30/93	08/02/93	07/30/93	07/30/93	07/30/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DIL. FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

ANALYSIS

TOTAL PETROLEUM HYDROCARBONS	24.0	< 0.10	< 0.10	< 0.10	< 0.10
TYPE	M. OIL	N/A	N/A	N/A	N/A

**SOLUTIONS LABORATORIES, INC.**

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**REPORT OF ANALYSIS**

DATE: AUGUST 2, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: LARC  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 07271993-004-01 THRU 16

MATRIX: SOIL

DATE/TIME SAMPLED: 07/27/93; 0930, 0935, 0945, 0950, 0956, 1004, 1013, 1019,  
1025, 1030, 1034, 1037, 1102, 1115, 0950, 1126

**METHOD 3550 MODIFIED 8015**

CLIENT NO:	393-15-A-36	155-14-B-12	350-14-E-24	518-14-A-48	533-14-B-48
LAB NO:	06A1	07A1	08A1	09A1	10A1
SAMPLE DATE:	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
RECEIVED DATE:	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
DATE EXTRACTED:	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
ANALYSIS DATE:	08/02/93	07/30/93	07/30/93	07/30/93	07/30/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DIL. FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

**ANALYSIS**

TOTAL PETROLEUM HYDROCARBONS	< 0.10	< 0.10	< 0.10	29.6	31.9
TYPE	N/A	N/A	N/A	M. OIL	M. OIL

**SOLUTIONS LABORATORIES, INC.**

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204  
**REPORT OF ANALYSIS**

DATE: AUGUST 2, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: LARC  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 07271993-004-01 THRU 16

MATRIX: SOIL

DATE/TIME SAMPLED: 07/27/93; 0930, 0935, 0945, 0950, 0956, 1004, 1013, 1019,  
1025, 1030, 1034, 1037, 1102, 1115, 0950, 1126

**METHOD 3550 MODIFIED 8015**

CLIENT NO:	30-13-B-5	223-13-E-12	475-13-E-36	601-13-E-38	238
LAB NO:	11A1	12A1	13A1	14A1	15A1
SAMPLE DATE:	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
RECEIVED DATE:	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
DATE EXTRACTED:	07/27/93	07/27/93	07/27/93	07/27/93	07/27/93
ANALYSIS DATE:	07/29/93	07/29/93	07/29/93	07/29/93	07/29/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DIL. FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

**ANALYSIS**

TOTAL PETROLEUM HYDROCARBONS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TYPE	N/A	N/A	N/A	N/A	N/A



SOLUTIONS LABORATORIES, INC.

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

REPORT OF ANALYSIS

DATE: AUGUST 2, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: LARC  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 07271993-004-01 THRU 16

MATRIX: SOIL

DATE/TIME SAMPLED: 07/27/93; 0930, 0935, 0945, 0950, 0956, 1004, 1013, 1019,  
1025, 1030, 1034, 1037, 1102, 1115, 0950, 1126

**METHOD 3550 MODIFIED 8015**

CLIENT NO: 18-D-5  
LAB NO: 16A1  
SAMPLE DATE: 07/27/93  
RECEIVED DATE: 07/27/93  
DATE EXTRACTED: 07/27/93  
ANALYSIS DATE: 07/29/93  
INSTRUMENT ID: HP/FID  
DIL. FACTOR: 0.25  
UNITS: mg/Kg

ANALYSIS

---

TOTAL PETROLEUM  
HYDROCARBONS < 0.10

TYPE N/A

REVIEWED BY:

*Dorothy S. Small*  
DOROTHY S. SMALL

[illegible]

<b>SOLUTION LOG #</b> 07271-13-0041		<b>Solutions Laboratories, Inc.</b> 814-B Greenbrier Circle Chesapeake, VA 23320 (804) 420-0467/Fax 420-4204		<b>CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST</b>																														
<b>COMPANY NAME:</b> Solutions Env. Assoc.		<b>ANALYSIS REQUEST</b>																																
<b>PROJECT MANAGER:</b> D. Small		<b>PHONE:</b>		<b>P.O#</b>																														
<b>ADDRESS (Office)</b>				<b>SITE LOCATION:</b> Ft. Story																														
<b>PROJECT NUMBER:</b>				<b>PROJECT NAME:</b> LARC																														
I Attest that the proper field sampling procedures were used during the collection of these samples. <b>Sampler's Signature:</b> Dorothy Small																																		
FIELD ID	SOURCE OF SAMPLE	SOL LAB#	# Containers	Container Size/Type	MATRIX					PRESERVATION					SAMPLING		TPH GC HS	Oil & Grease 503 B&D	BTEX only 602	EPA 602	EPA 601	EPA 608	EPA 615	TCLP Metals	Silver	Lead FLAA	Corr	Phenols	Ammonia	BOD	COD	TOC		
					Water	Soil	Air	Sludge	Liquid	Other	HCl	HNO3	H2SO4	NaOH	Ice	None																	Other	Date
30 13E-5		11	2	VOA	X																													
13E-12		12	1																															
475 13E-36		13	2																															
601 13E-38		14	2																															
238		15	1																															
18-D-5		16	1																															
RELINQUISHED BY SAMPLER:					DATE:		TIME:		RECEIVED BY:					<b>REMARKS/SPECIAL DETECTION LIMITS:</b>  <b>SPECIAL REPORT REQUIREMENTS:</b>  <b>FAX</b>																				
RELINQUISHED BY:					DATE:		TIME:		RECEIVED BY:																									
RELINQUISHED BY:					DATE:		TIME:		RECEIVED BY:																									
<b>CONTAINER TYPE KEY:</b> GL=GLASS AM=AMBER PL=PLASTIC WM=WIDEMOUTH VOA= VOLATILE ORGANIC CONTAINER L=LITER 500=500 ML 250=250ML														<b>SPECIAL HANDLING:</b>																				
														EXPEDITED 72 HR <input checked="" type="checkbox"/> 48 HR <input type="checkbox"/> 24 HR <input type="checkbox"/> 12 HR <input type="checkbox"/> 8 HR <input type="checkbox"/> 4 HR <input type="checkbox"/> HR <input type="checkbox"/>																				

**SOLUTIONS LABORATORIES, INC.**

814 B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**CHAIN-OF-CUSTODY REPORT**

SOLUTIONS LOG #: 08231993-001-01 THRU 06

COMPANY NAME: SOLUTIONS ENVIRONMENTAL ASSOCIATES

PROJECT MANAGER: AL DAVIS

BILLING ADDRESS: 814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320

TELEPHONE #: (804) 420-0467

FAX #: (804) 420-4204

P.O.#: N/A

DATE/TIME RECEIVED: 08/23/93; 1205

SAMPLER: A. C. DAVIS

SAMPLE ID	FIELD SAMPLE ID	SAMPLED DATE	SAMPLED TIME	# OF CONT.	CONTAINER	LOCATION	PRESERV.	MATRIX
01A1,A2	1-A-S-01	08/23/93	1027	2	4 OZ GL	FT. STORY	ICE	SOIL
02A1,A2	3-F-S-124	08/23/93	1030	2	4 OZ GL	FT. STORY	ICE	SOIL
03A1,A2	4-A-S-04	08/23/93	1025	2	4 OZ GL	FT. STORY	ICE	SOIL
04A1,A2	8-D-12-203	08/23/93	1105	2	4 OZ GL	FT. STORY	ICE	SOIL
05A1,A2	9-E-36-471	08/23/93	1058	2	4 OZ GL	FT. STORY	ICE	SOIL
06A1,A2	11-B-24-284	08/23/93	1039	2	4 OZ GL	FT. STORY	ICE	SOIL

SAMPLE ID	ANALYSIS TO BE PERFORMED	DUE DATE
01A1>06A1	TPH 3550/8015	08/30/93

CONDITION OF SAMPLE: GOOD

RECEIVED BY: JO ANN FEROLINO

RELINQUISHED BY: A. C. DAVIS

**SOLUTIONS LABORATORIES, INC.**

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**REPORT OF ANALYSIS**

DATE: AUGUST 30, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: LARC SITE  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 08231993-001-01 THRU 06  
MATRIX: SOIL  
DATE/TIME SAMPLED: 08/23/93; 1027, 1030, 1025, 1105, 1058, 1039

**METHOD 3550 MODIFIED 8015**

CLIENT NO:	1-A-S-01	3-F-S-124	4-A-S-04	8-D-12-203	9-E-36-471
LAB NO:	01A1	02A1	03A1	04A1	05A1
SAMPLE DATE:	08/23/93	08/23/93	08/23/93	08/23/93	08/23/93
RECEIVED DATE:	08/23/93	08/23/93	08/23/93	08/23/93	08/23/93
DATE EXTRACTED:	08/26/93	08/26/93	08/26/93	08/26/93	08/26/93
ANALYSIS DATE:	08/27/93	08/26/93	08/26/93	08/26/93	08/26/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

**ANALYSIS**

TOTAL PETROLEUM HYDROCARBONS	< 0.10	< 0.10	< 0.10	< 0.10	3.99 ✓
TYPE	N/A	N/A	N/A	N/A	DIESEL ✓

**SOLUTIONS LABORATORIES, INC.**

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**REPORT OF ANALYSIS**

DATE: AUGUST 30, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: LARC SITE  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 08231993-001-01 THRU 06  
MATRIX: SOIL  
DATE/TIME SAMPLED: 08/23/93; 1027, 1030, 1025, 1105, 1058, 1039

**METHOD 3550 MODIFIED 8015**

CLIENT NO: 11-B-24-284  
LAB NO: 06A1  
SAMPLE DATE: 08/23/93  
RECEIVED DATE: 08/23/93  
DATE EXTRACTED: 08/26/93  
ANALYSIS DATE: 08/26/93  
INSTRUMENT ID: HP/FID  
DILUTION FACTOR: 0.25  
UNITS: mg/Kg

**ANALYSIS**

---

TOTAL PETROLEUM  
HYDROCARBONS 12.7  
  
TYPE M. OIL

REVIEWED BY:

*Dorothy S. Small*  
DOROTHY S. SMALL

[illegible]

# SOLUTIONS LABORATORIES, INC.

814 B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

## CHAIN-OF-CUSTODY REPORT

SOLUTIONS LOG #: 08031993-003-01 THRU 32

COMPANY NAME: SOLUTIONS ENVIRONMENTAL ASSOCIATES

PROJECT MANAGER: AL DAVIS

BILLING ADDRESS: 814-A GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320

TELEPHONE #: (804) 420-0467

FAX #: (804) 420-4204

P.O.#: N/A

DATE/TIME RECEIVED: 08/03/93; 1545

SAMPLER: DOROTHY S. SMALL

SAMPLE ID	FIELD SAMPLE ID	SAMPLED DATE	SAMPLED TIME	# OF CONT.	CONTAINER	LOCATION	PRESERV.	MATRIX
01A1	12-A-24	08/03/93	1035	1	40 ML VOA	FT. STORY	NONE	SOIL
02A1	11-C-S	08/03/93	1040	1	40 ML VOA	FT. STORY	NONE	SOIL
03A1	11-E-S	08/03/93	1043	1	40 ML VOA	FT. STORY	NONE	SOIL
04A1	11-F-S	08/03/93	1045	1	40 ML VOA	FT. STORY	NONE	SOIL
05A1	11-B-24	08/03/93	1050	1	40 ML VOA	FT. STORY	NONE	SOIL
06A1	10-C-12	08/03/93	1055	1	40 ML VOA	FT. STORY	NONE	SOIL
07A1	10-E-36	08/03/93	1100	1	40 ML VOA	FT. STORY	NONE	SOIL
08A1	9-A-12	08/03/93	1104	1	40 ML VOA	FT. STORY	NONE	SOIL
09A1	9-B-24	08/03/93	1120	1	40 ML VOA	FT. STORY	NONE	SOIL
10A1	9-E-36	08/03/93	1128	1	40 ML VOA	FT. STORY	NONE	SOIL
11A1	9-F-36	08/03/93	1133	1	40 ML VOA	FT. STORY	NONE	SOIL
12A1	8-A-S	08/03/93	1140	1	40 ML VOA	FT. STORY	NONE	SOIL
13A1	8-A-12	08/03/93	1150	1	40 ML VOA	FT. STORY	NONE	SOIL
14A1	8-B-12	08/03/93	1145	1	40 ML VOA	FT. STORY	NONE	SOIL
15A1	8-D-12	08/03/93	1155	1	40 ML VOA	FT. STORY	NONE	SOIL
16A1	7-E-48	08/03/93	1205	1	40 ML VOA	FT. STORY	NONE	SOIL
17A1	6-B-12	08/03/93	1210	1	40 ML VOA	FT. STORY	NONE	SOIL
18A1	6-F-12	08/03/93	1215	1	40 ML VOA	FT. STORY	NONE	SOIL
19A1	5-F-48	08/03/93	1220	1	40 ML VOA	FT. STORY	NONE	SOIL
20A1	4-A-S	08/03/93	1225	1	40 ML VOA	FT. STORY	NONE	SOIL
21A1	4-D-S	08/03/93	1230	1	40 ML VOA	FT. STORY	NONE	SOIL
22A1	4-D-12	08/03/93	1235	1	40 ML VOA	FT. STORY	NONE	SOIL
23A1	4-D-48	08/03/93	1240	1	40 ML VOA	FT. STORY	NONE	SOIL
24A1	3-C-S	08/03/93	1242	1	40 ML VOA	FT. STORY	NONE	SOIL
25A1	3-F-S	08/03/93	1245	1	40 ML VOA	FT. STORY	NONE	SOIL
26A1	3-A-24	08/03/93	1250	1	40 ML VOA	FT. STORY	NONE	SOIL
27A1	3-E-24	08/03/93	1255	1	40 ML VOA	FT. STORY	NONE	SOIL
28A1	2-A-S	08/03/93	1300	1	40 ML VOA	FT. STORY	NONE	SOIL
29A1	2-D-S	08/03/93	1303	1	40 ML VOA	FT. STORY	NONE	SOIL
30A1	1-A-S	08/03/93	1310	1	40 ML VOA	FT. STORY	NONE	SOIL
31A1	595	08/03/93	1205	1	40 ML VOA	FT. STORY	NONE	SOIL
32A1	505	08/03/93	1310	1	40 ML VOA	FT. STORY	NONE	SOIL

SAMPLE ID	ANALYSIS TO BE PERFORMED	DUE DATE
01A1>32A1	TPH 3550/8015	08/10/93

CONDITION OF SAMPLE: NOT PRESERVED

RECEIVED BY: JO ANN FEROLINO

RELINQUISHED BY: DOROTHY S. SMALL



# SOLUTIONS LABORATORIES, INC.

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

## REPORT OF ANALYSIS

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-A GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: CLOSE OUT GRID  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104,  
1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215,  
1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300,  
1303, 1310, 1205, 1310

### **METHOD 3550 MODIFIED 8015**

CLIENT NO:	12-A-24	11-C-S	11-E-S	11-F-S	11-B-24
LAB NO:	01A1	02A1	03A1	04A1	05A1
SAMPLE DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
RECEIVED DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
DATE EXTRACTED:	08/04/93	08/04/93	08/04/93	08/04/93	08/04/93
ANALYSIS DATE:	08/06/93	08/06/93	08/05/93	08/06/93	08/06/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

### ANALYSIS

TOTAL PETROLEUM HYDROCARBONS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
TYPE	N/A	N/A	N/A	N/A	N/A

**SOLUTIONS LABORATORIES, INC.**

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**REPORT OF ANALYSIS**

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-A GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: CLOSE OUT GRID  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104,  
1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215,  
1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300,  
1303, 1310, 1205, 1310

**METHOD 3550 MODIFIED 8015**

CLIENT NO:	10-C-12	10-E-36	9-A-12	9-B-24	9-E-36
LAB NO:	06A1	07A1	08A1	09A1	10A1
SAMPLE DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
RECEIVED DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
DATE EXTRACTED:	08/04/93	08/04/93	08/04/93	08/04/93	08/04/93
ANALYSIS DATE:	08/06/93	08/08/93	08/05/93	08/06/93	08/08/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

**ANALYSIS**

TOTAL PETROLEUM HYDROCARBONS	< 0.10	< 0.10	< 0.10	
DIESEL	1.44			3.69
MOTOR OIL	36.7			14.4
TYPE	N/A	N/A	N/A	

# SOLUTIONS LABORATORIES, INC.

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

## REPORT OF ANALYSIS

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-A GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: CLOSE OUT GRID  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104,  
1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215,  
1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300,  
1303, 1310, 1205, 1310

### METHOD 3550 MODIFIED 8015

CLIENT NO:	9-F-36	8-A-S	8-A-12	8-B-12	8-D-12
LAB NO:	11A1	12A1	13A1	14A1	15A1
SAMPLE DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
RECEIVED DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
DATE EXTRACTED:	08/04/93	08/04/93	08/04/93	08/04/93	08/04/93
ANALYSIS DATE:	08/08/93	08/06/93	08/07/93	08/07/93	08/05/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

### ANALYSIS

TOTAL PETROLEUM HYDROCARBONS		< 0.10		< 0.10
DIESEL	2.56		0.64	
MOTOR OIL	86.8		16.3	21.5
TYPE		N/A		N/A

# SOLUTIONS LABORATORIES, INC.

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

## REPORT OF ANALYSIS

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-A GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: CLOSE OUT GRID  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104,  
1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215,  
1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300,  
1303, 1310, 1205, 1310

### METHOD 3550 MODIFIED 8015

CLIENT NO:	7-E-48	6-B-12	6-F-12	5-F-48	4-A-S
LAB NO:	16A1	17A1	18A1	19A1	20A1
SAMPLE DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
RECEIVED DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
DATE EXTRACTED:	08/09/93	08/09/93	08/04/93	08/04/93	08/04/93
ANALYSIS DATE:	08/10/93	08/10/93	08/08/93	08/07/93	08/05/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

### ANALYSIS

TOTAL PETROLEUM HYDROCARBONS			16.8	< 0.10	< 0.10
DIESEL	5.67	2.34			
MOTOR OIL	62.8	32.5			
TYPE			DIESEL/M.OIL	N/A	N/A

# SOLUTIONS LABORATORIES, INC.

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

## REPORT OF ANALYSIS

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-A GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: CLOSE OUT GRID  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104,  
1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215,  
1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300,  
1303, 1310, 1205, 1310

### METHOD 3550 MODIFIED 8015

CLIENT NO:	4-D-S	4-D-12	4-D-48	3-C-S	3-F-S
LAB NO:	21A1	22A1	23A1	24A1	25A1
SAMPLE DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
RECEIVED DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
DATE EXTRACTED:	08/04/93	08/04/93	08/04/93	08/04/93	08/04/93
ANALYSIS DATE:	08/06/93	08/07/93	08/05/93	08/05/93	08/05/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

### ANALYSIS

TOTAL PETROLEUM HYDROCARBONS			< 0.10	< 0.10	< 0.10
DIESEL		8.63			
MOTOR OIL	28.3	9.06			
TYPE			N/A	N/A	N/A

**SOLUTIONS LABORATORIES, INC.**

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

**REPORT OF ANALYSIS**

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-A GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: CLOSE OUT GRID  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32

MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104,  
1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215,  
1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300,  
1303, 1310, 1205, 1310

**METHOD 3550 MODIFIED 8015**

CLIENT NO:	3-A-24	3-E-24	2-A-S	2-D-S	1-A-S
LAB NO:	26A1	27A1	28A1	29A1	30A1
SAMPLE DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
RECEIVED DATE:	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93
DATE EXTRACTED:	08/09/93	08/09/93	08/04/93	08/09/93	08/04/93
ANALYSIS DATE:	08/11/93	08/10/93	08/05/93	08/11/93	08/05/93
INSTRUMENT ID:	HP/FID	HP/FID	HP/FID	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25	0.25	0.25	0.25
UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg

**ANALYSIS**

TOTAL PETROLEUM HYDROCARBONS			< 0.10	22.7	
DIESEL	121	57.4			
MOTOR OIL	3.85				42.9
TYPE			N/A	DIESEL/M.OIL	

SOLUTIONS LABORATORIES, INC.

814-B GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(T) (804) 420-0467  
(F) (804) 420-4204

REPORT OF ANALYSIS

DATE: AUGUST 11, 1993

SOLUTIONS ENVIRONMENTAL ASSOCIATES, INC.  
814-A GREENBRIER CIRCLE  
CHESAPEAKE, VA 23320  
(804) 420-0467

PROJECT NAME: CLOSE OUT GRID  
PROJECT NUMBER: N/A

SOLUTIONS LOG: 08031993-003-01 THRU 32  
MATRIX: SOIL

DATE/TIME SAMPLED: 08/03/93; 1035, 1040, 1043, 1045, 1050, 1055, 1100, 1104,  
1120, 1128, 1113, 1140, 1150, 1145, 1155, 1205, 1210, 1215,  
1220, 1225, 1230, 1235, 1240, 1242, 1245, 1250, 1255, 1300,  
1303, 1310, 1205, 1310

**METHOD 3550 MODIFIED 8015**

CLIENT NO:	595	505
LAB NO:	31A1	32A1
SAMPLE DATE:	08/03/93	08/03/93
RECEIVED DATE:	08/03/93	08/03/93
DATE EXTRACTED:	08/09/93	08/04/93
ANALYSIS DATE:	08/10/93	08/05/93
INSTRUMENT ID:	HP/FID	HP/FID
DILUTION FACTOR:	0.25	0.25
UNITS:	mg/Kg	mg/Kg

ANALYSIS

TOTAL PETROLEUM  
HYDROCARBONS < 0.10

DIESEL 4.37

MOTOR OIL 41.6

TYPE N/A

REVIEWED BY:

*Dorothy S. Small, P*  
DOROTHY S. SMALL

SOLUTION #		OG #	
08031793-003			
COMPANY NAME:		Solutions Laboratories, Inc.	
Sol. Envir. Assoc., Inc.		814-B Greenbrier Circle Chesapeake, VA 23320 (804) 420-0467/Fax 420-4204	
PROJECT MANAGER:		PHONE:	
AL Davis		410-0467	
ADDRESS (Office)		SITE LOCATION:	
814-B Greenbrier Cir Ches, VA		FT. Story	
PROJECT NUMBER:		PROJECT NAME:	
		Close Out Period	
I Attest that the proper field sampling procedures were used during the collection of these samples. Sampler's Signature:			
Dorothy Small			
FIELD ID			
SOURCE OF SAMPLE			
SOL LAB#			
# Containers			
Container Size/Type			
MATRIX			
PRESERVATION			
SAMPLING			
TPH GC HS			
Oil & Grease 503 B&D			
BTEX only 602			
EPA 602			
EPA 601			
EPA 608			
EPA 615			
TCLP Metals			
Silver Metals			
Lead FLAA			
Corr Flash React			
Phenols Cyanide			
Ammonia TKN Tot P			
BOD COD TOC			
FF			
5030			
3550			
TPH 418.1			
MTBE			
PCBs			
Semi VOA			
GFAA			
React			
TKN			
COD			
TOC			
Date			
Time			
8/3/93			
1035			
✓			
1040			
✓			
1043			
✓			
1045			
✓			
1050			
✓			
1055			
✓			
1100			
✓			
1104			
✓			
1120			
✓			
1128			
✓			
REMARKS/SPECIAL DETECTION LIMITS:			
SPECIAL REPORT REQUIREMENTS:			
FAX			
CONTAINER TYPE KEY: GL=GLASS AM=AMBER PL=PLASTIC WM=WIDEMOUTH			
VOA= VOLATILE ORGANIC CONTAINER L=LITER 500=500 ML 250=250ML			
SPECIAL HANDLING:			
EXPEDITED 72 HR 48 HR 24 HR 12 HR			
8 HR 4 HR HR			



SOLUTION LOG #  
08031193-003  
COMPANY NAME:  
Sol. Envir Assoc, Inc

Solutions Laboratories, Inc.  
814-B Greenbrier Circle  
Chesapeake, VA 23320  
(804) 420-0467/Fax 420-4204

# CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Page 2 of 4

## ANALYSIS REQUEST

PROJECT MANAGER: PHONE: P.O#

HL Davis 420-0467

ADDRESS (Office) SITE LOCATION:

814 B Greenbrier Cir Ches, VA Ft. Story

PROJECT NUMBER: PROJECT NAME:

CLOSE OUT GRID

I Attest that the proper field sampling procedures were used during the collection of these samples. Sampler's Signature: David S Small

FIELD ID	SOURCE OF SAMPLE	SOL LAB#:	# Containers	Container Size/Type	MATRIX						PRESERVATION						SAMPLING		
					Water	Soil	Air	Sludge	Liquid	Other	HCl	HNO3	H2SO4	NaOH	Ice	None	Other	Date	Time
9-F-36		11	1	40 mL 10A	✓													8/3/93	1133
8-A-5		12	1		✓														1140
8-A-12		13	1		✓														1150
8-B-12		14	1		✓														1145
8-D-12		15	1		✓														1155
7-E-48		16	1		✓														1205
6-B-12		17	1		✓														1210
6-F-12		18	1		✓														1215
5-F-48		19	1		✓														1220
4-A-5		20	1	✓	✓												✓		1225

RELINQUISHED BY SAMPLER: DATE: TIME: RECEIVED BY:

David S Small

RELINQUISHED BY: DATE: TIME: RECEIVED BY:

RELINQUISHED BY: DATE: TIME: RECEIVED BY:

8/3/93 1545 J. L. Ferolino

REMARKS/SPECIAL DETECTION LIMITS:

SPECIAL REPORT REQUIREMENTS:

FAX

CONTAINER TYPE KEY: GL=GLASS AM=AMBER PL=PLASTIC WM=WIDEMOUTH  
VOA= VOLATILE ORGANIC CONTAINER L=LITER 500=500 ML 250=250ML

SPECIAL HANDLING:

EXPEDITED 72 HR ☐ 48 HR ☐ 24 HR ☐ 12 HR ☐  
8 HR ☐ 4 HR ☐ HR ☐

[illegible]

[illegible]

## **CHAIN-OF-CUSTODY RECORDS**



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD \*

Reference Document No. 440165

Page 1 of 1

Project Name/No. <sup>1</sup> FT. STORY 519029 Samples Shipment Date <sup>7</sup> 1-22-93  
Sample Team Members <sup>2</sup> ROBERG - Simpson Lab Destination <sup>8</sup> EXPORT PA  
Profit Center No. <sup>3</sup> 2254 Lab Contact <sup>9</sup> VERONICA BARTOT  
Project Manager <sup>4</sup> TOM MATHISON Project Contact/Phone <sup>12</sup> 412-392-7701  
Purchase Order No. <sup>6</sup> \_\_\_\_\_ Carrier/Waybill No. <sup>13</sup> IT CORP  
Required Report Date <sup>11</sup> \_\_\_\_\_

Bill to: <sup>5</sup> TOM MATHISON (FT. STORY)  
IT CORP  
2790 MASSIDE BLVD  
MONROEVILLE PA 15146  
Report to: <sup>10</sup> TOM MATHISON  
IT CORP  
2790 MASSIDE BLVD  
MONROEVILLE PA 15146

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
519029-S001	SOIL	1-21-93	GLASS	1-250ML	NONE	TCLP LEAD	OK	
519029-S002	↓	↓	↓	↓	↓	↓	FOR LAB USE ONLY	
519029-S003	↓	↓	↓	↓	↓	↓		
519029-W001	LIQUID		GLASS	1-500ML	NONE	PEST/PCB, BNA		
			PLASTIC	1-LITER	10N NaOH	CYANIDE	FOR LAB USE ONLY	
			↓	↓	HNO3	METALS		
			GLASS	500ML	HNO3	MERCURY		
			↓	2-40ML	HCL	VOA		

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☐ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐

Project Specific (specify): \_\_\_\_\_

1. Relinquished by <sup>28</sup>

(Signature/Affiliation) John Roberg IT CORP

Date: 1-22-93

Time: 1240

1. Received by <sup>28</sup>

(Signature/Affiliation) J. Smith

Date: 1-22-93

Time: 1240

2. Relinquished by

(Signature/Affiliation)

Date:

Time:

2. Received by

(Signature/Affiliation)

Date:

Time:

3. Relinquished by

(Signature/Affiliation)

Date:

Time:

3. Received by

(Signature/Affiliation)

Date:

Time:

Comments: <sup>29</sup>

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

**ANALYSIS REQUEST AND  
CHAIN OF CUSTODY RECORD\***

Reference Document No. **113514**  
Page 1 of       

Project Name/No. 1 Ft. Story  
Sample Team Members 2 Randy / Luke  
Profit Center No. 3 3511  
Project Manager 4 Tom Mathison  
Purchase Order No. 6  
Required Report Date 11 10/15/95

Samples Shipment Date 7 10/13/93  
Lab Destination 8 Austin, Texas  
Lab Contact 9 LAL  
Project Contact/Phone 12 Tom Mathison  
Carrier/Waybill No. 13

Bill to: 5 IT Corp  
2790 Mossie Blvd.  
Monroeville PA.  
Attn: Tom Mathison  
Report to: 10 Tom Mathison  
1-800-444-9596

**ONE CONTAINER PER LINE**

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
E-15-477	SAND/soil	10/13 1100	250ml	Soil	None	Kerosene	Rec good Sec non 10-14-93 PC	
C-15-435		10/13 1115					FOR LAB USE ONLY	
D-14-449		10/13 1120						
C-13-433		10/13 1130						
E-12-474		10/13 1135					FOR LAB USE ONLY	
C-10-430		10/13 1140						
E-7-469		10/13 1155						
C-6-426		10/13 1200						

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☐ Archive ☐ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☐ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by <sup>28</sup>  
(Signature/Affiliation)

Date:  
Time:

1. Received by <sup>28</sup>  
(Signature/Affiliation)

Date: 10-19-93  
Time: 0857

2. Relinquished by  
(Signature/Affiliation)

Date:  
Time:

2. Received by  
(Signature/Affiliation)

Date:  
Time:

3. Relinquished by  
(Signature/Affiliation)

Date:  
Time:

3. Received by  
(Signature/Affiliation)

Date:  
Time:

Comments: <sup>29</sup>

Write: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.<sup>3u</sup> 413518

Page 1 of 22

Project Name FTT. Steffy

Project No. \_\_\_\_\_

Samples Shipment Date 12/13/92

## ONE CONTAINER PER LINE

[illegible]

White: To accompany samples

**Yellow: Field copy**

**\*See back of form for special instructions**



INTERNATIONAL  
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# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

0310167

Reference Document No. 416513  
Page 1 of 1

Project Name/No. 1 Ft. Story  
Sample Team Members 2 Randy Hook  
Profit Center No. 3 3511  
Project Manager 4 TOM MATHISON  
Purchase Order No. 6  
Required Report Date 11 10/15/93

Samples Shipment Date 7 10/13/93  
Lab Destination 8 AUSTIN, TEXAS  
Lab Contact 9  
Project Contact/Phone 12  
Carrier/Waybill No. 13

Bill to: 5 IT Corp  
2790 Moss Side Blvd.  
Monroeville, PA.  
Attn: Tom Mathison  
Report to: 10 TOM MATHISON  
IT Corp

## ONE CONTAINER PER LINE

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Pre-servative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
E-16-352	sand / soil	10/13 0830	Clear 250ml	Filled sand	None	Kerosene	Rel 9000, 1°C See RVR 10-14-93	
C-16-310		10/13 0840	250ml	sand	None		FOR LAB USE ONLY	
C-14-308		10/13 0900	350ml	sand				
E-13-349		10/13 0840	250ml				FOR LAB USE ONLY	
D-12-325		10/13 0945	250ml					
E-11-347		10/13 0955						
C-10-304		10/13 0100						
D-6-331		10/13 1030						

Special Instructions: 23

Possible Hazard Identification: 24

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: 25

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: 26

Normal ☐ Rush ☒

QC Level: 27

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by 28

(Signature/Affiliation)

Randy Hook

Date: 10/13/93

Time: 1300

1. Received by 28

(Signature/Affiliation)

IT Corp

Date: 10-14-93

Time: 0857

2. Relinquished by

(Signature/Affiliation)

Date:

Time:

2. Received by

(Signature/Affiliation)

Date:

Time:

3. Relinquished by

(Signature/Affiliation)

Date:

Time:

3. Received by

(Signature/Affiliation)

Date:

Time:

Comments: 29

White: To accompany samples

Yellow: Field copy

\*See back of form for special instructions.





## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No. <sup>3c</sup> 416513  
Page 1 of 2

Project Name FA 52-26

Project No. \_\_\_\_\_

Samples Shipment Date 10/12/93

## ONE CONTAINER PER LINE

[illegible]

White: To accompany samples

Yellow: Field copy

**\*See back of form for special instructions**



**INTERNATIONAL  
TECHNOLOGY  
CORPORATION**

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. **458294**  
Page 1 of 2

Project Name/No. 1 Fort Story 519028 Samples Shipment Date 7 3-22-94  
Sample Team Members 2 Demarco/Bernardo Lab Destination 8 IT Export  
Profit Center No. 3 3511 Lab Contact 9 Carrie Smith  
Project Manager 4 Tom Mathison Project Contact/Phone 12 Tom Mathison (412) 372-7701  
Purchase Order No. 6 519029 Carrier/Waybill No. 13 9710126193  
Required Report Date 11 N TAT

Bill to: 5 Tom Mathison  
IT Corp  
2790 Mossdale Blvd  
Monroeville Pa 15146  
Report to: 10 Tom Mathison  
IT Corp  
2790 Mossdale Blvd  
Monroeville Pa 15146

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
01A-032294	Soil	3-22-94 8:00	amber glass	(3) 60ml	ice 40	8015	<b>FOR LAB USE ONLY</b>	
01A-032294	Soil	3-22-94 8:00	amber glass	250ml	ice 40	418.1		
43C-032294	Soil	3-22-94 8:10	amber glass	60ml	ice 40	8015		
43C-032294	Soil	3-22-94 8:10	amber glass	250ml	ice 40	418.1		
85E-032294	Soil	3-22-94 8:20	amber glass	60ml	ice 40	8015	<b>FOR LAB USE ONLY</b>	
905E-032294	Soil	3-22-94 8:20	amber glass	250ml	ice 40	418.1		
40B-032294	Soil	3-22-94 8:30	amber glass	(3) 60ml	ice 40	8015		
40B-032294	Soil	3-22-94 8:30	amber glass	250ml	ice 40	418.1		

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐ 10 days

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐

Project Specific (specify): \_\_\_\_\_

1. Relinquished by <sup>28</sup>  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

1. Received by <sup>28</sup>  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Relinquished by  
(Signature/Affiliation)

Date: 3/22/94  
Time: 4:30

2. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Comments: <sup>29</sup>

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No. <sup>30</sup> 153294

Page 2 of 2

Project Name Fort Story

Project No. 519029

Samples Shipment Date 3/27/94

## ONE CONTAINER PER LINE

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
124F-032294	Soil	3-22-94 8:40	Amber glass	(3) 60ml	ice 40	8015		
124F-032294	Soil	3-22-94 8:40	Amber glass	250ml	ice 40	418.1		
82D-032294	Soil	3-22-94 8:50	Amber glass	(3) 60ml	ice 40	8015		
82D-032294	Soil	3-22-94 8:50	Amber glass	250ml	ice 40	418.1		
82DDUP-032294	Soil	3-22-94 9:10	Amber glass	(3) 60ml	ice 40	8015		
82DDUP-032294	Soil	3-22-94 9:10	Amber glass	250ml	ice 40	418.1		
<del>124F-032294</del>	<del>Soil</del>	<del>3-22-94 9:20</del>	<del>Amber glass</del>	<del>(3) 60ml</del>	<del>ice 40</del>	<del>8015</del>		
<del>124F-032294</del>	<del>Soil</del>	<del>3-22-94 9:20</del>	<del>Amber glass</del>	<del>250ml</del>	<del>ice 40</del>	<del>418.1</del>		
05A-032294	Soil	3-22-94 9:30	Amber glass	(3) 60ml	ice 40	8015		
05A-032294	Soil	3-22-94 9:30	Amber glass	250ml	ice 40	418.1		
47C-032294	Soil	3-22-94 9:45	Amber glass	(3) 60ml	ice 40	8015		
47C-032294	Soil	3-22-94 9:45	Amber glass	250ml	ice 40	418.1		
VOID	Soil		Amber glass	(3) 60ml	ice 40	8015		
VOID	Soil		Amber glass	250ml	ice 40	418.1		
VOID	Soil		Amber glass	(3) 60ml	ice 40	8015		
VOID	Soil		Amber glass	250ml	ice 40	418.1		
VOID	Soil		Amber glass	(3) 60ml	ice 40	8015		
VOID	Soil		Amber glass	250ml	ice 40	418.1		
VOID	Soil		Amber glass	(3) 60ml	ice 40	8015		
VOID	Soil		Amber glass	250ml	ice 40	418.1		
VOID	Soil		Amber glass	(3) 60ml	ice 40	8015		
VOID	Soil		Amber glass	250ml	ice 40	418.1		

Write: To accompany samples

Yellow: Field copy

\* See back of form for special instructions



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. 417552  
Page 1 of 1

Project Name/No. 1 Fort Story 519029  
Sample Team Members 2 Demarco/Bernardo  
Profit Center No. 3 3511  
Project Manager 4 Tom Mathison  
Purchase Order No. 6 519029  
Required Report Date 11

Samples Shipment Date 7 3-22-94  
Lab Destination 8 MBD Lab  
Lab Contact 9  
Project Contact/Phone 12 Mathison (412) 372-7701  
Carrier/Waybill No. 13 9626951972

Bill to: 5 Tom Mathison IT Corp  
2790 Mosside Blvd  
Monroeville Pa 15146  
Report to: 10 Tom Mathison  
IT Corp  
2790 Mosside Blvd  
Monroeville PA 15146

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
082D-032294	soil	3-22-94 9:00	amber glass	(3) 60ml	ice 4°	8015	FOR LAB USE ONLY	
082D-032294	soil	3-22-94 9:00	amber glass	250ml	ice 4°	418.1		
30D-032294	soil	3-22-94 10:55	amber glass	60ml	ice 4°	8015		
30D-032294	soil	3-22-94 10:55	amber glass	250ml	ice 4°	418.1		
							FOR LAB USE ONLY	

### Special Instructions: <sup>23</sup>

#### Possible Hazard Identification: <sup>24</sup>

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

#### Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

#### Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐

#### QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify): \_\_\_\_\_

#### 1. Relinquished by <sup>28</sup>

(Signature/Affiliation)

Date: 3/22/94

Time: 4:20

#### 1. Received by <sup>28</sup>

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

#### 2. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

#### 2. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

#### 3. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

#### 3. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

#### Comments: <sup>29</sup>

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. **113603**  
Page 1 of **2**

Project Name/No. **47. Story 519029** Samples Shipment Date **7 3-22-94**  
Sample Team Members **2 DeMarco / Bernardo** Lab Destination **8 IT Export**  
Profit Center No. **3 3511** Lab Contact **9 Carrie Smith**  
Project Manager **4 T. Mathison** Project Contact/Phone **F. Mathison (H12) 372-7701**  
Purchase Order No. **6 519029** Carrier/Waybill No. **139710126193**  
Required Report Date **11**

Bill to: **Tom Mathison**  
**IT Corp**  
**2790 Mossdale Blvd.**  
**Monroeville Pa 15146**  
Report to: **Tom Mathison**  
**IT Corp**  
**2790 Mossdale Blvd.**  
**Monroeville Pa 15146**

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
35B-032294	Soil	10:05 3-22-94	amber glass	(3) 60ml	ice 40	8015		
35B-032294	soil	10:05 3-22-94	amber glass	250ml	ice 40	418.1		
72D-032294	soil	11:05 3-22-94	amber glass	60ml	ice 40	8015		
72D-032294	soil	11:05 3-22-94	amber glass	250ml	ice 40	418.1		
99E-032294	soil	11:45 3-22-94	amber glass	(3) 60ml	ice 40	8015		
99E-032294	soil	11:45 3-22-94	amber glass	250ml	ice 40	418.1		
10A-0322-94	soil	10:25 3-22-94	amber glass	(3) 60ml	ice 40	8015		
10A-0322-94	soil	10:25 3-22-94	amber glass	250ml	ice 40	418.1		

Special Instructions: **23**

Possible Hazard Identification: **24**

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: **25**

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: **26**

Normal ☒ Rush ☐ **10 days**

QC Level: **27**

I. ☐ II. ☐ III. ☐ Project Specific (specify): \_\_\_\_\_

1. Relinquished by **28**  
(Signature/Affiliation) *Carrie Smith*

Date: **3/22/94**  
Time: **4:30**

1. Received by **28**  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Comments: **29**

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.





INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD \*

Reference Document No. **453295**  
Page 1 of **2**

Project Name/No. **1 Fl. Story 519029** Samples Shipment Date **7 3-22-94**  
Sample Team Members **2 DeMarco / Bernardo** Lab Destination **8 IT Export**  
Profit Center No. **3 3511** Lab Contact **9 Carrie Smith**  
Project Manager **4 Tom Mathison** Project Contact/Phone **12 Tom Mathison (412) 372-7701**  
Purchase Order No. **6 519029** Carrier/Waybill No. **13**  
Required Report Date **11**

Bill to: **5 Tom Mathison**  
**IT Corp**  
**2790 Mossido Blvd.**  
**Monroeville Pa 15146**  
Report to: **10 Tom Mathison**  
**IT Corp**  
**2790 Mossido Blvd.**  
**Monroeville Pa 15146**

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Preservative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
20A-032294	soil	12:15 3-22-94	amber glass	(3) 60ml	ice 4°	8015		
20A-032294	soil	12:15 3-22-94	amber glass	250ml	ice 4°	418.1		
67D-032294	soil	12:00 3-22-94	amber glass	(3) 60ml	ice 4°	8015		
67D-032294	soil	12:00 3-22-94	amber glass	250ml	ice 4°	418.1		
25B-032294	soil	11:55 3-22-94	amber glass	(3) 60ml	ice 4°	8015		
25B-032294	soil	11:55 3-22-94	amber glass	250ml	ice 4°	418.1		
64D-032294	soil	12:25 3-22-94	amber glass	(3) 60ml	ice 4°	8015		
64D-032294	soil	12:25 3-22-94	amber glass	250ml	ice 4°	418.1		

**FOR LAB  
USE ONLY**

**FOR LAB  
USE ONLY**

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐ **10 days**

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify): \_\_\_\_\_

1. Relinquished by <sup>28</sup>  
(Signature/Affiliation) *Tom Mathison*

Date: **3/22/94**  
Time: **4:30**

1. Received by <sup>28</sup>  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Comments: <sup>29</sup>

Write: To accompany samples  
Yellow: Field copy  
\* See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No. 30 453 275  
Page 2 of 2

Project Name Fort Story

Project No. 519029

Samples Shipment Date \_\_\_\_\_

## ONE CONTAINER PER LINE

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
22B-032294	soil	12:15 3-22-94	amber glass	(3) 60ml	ice 40	8015		
22B-032294	soil	12:15 3-22-94	amber glass	250 ml	ice 40	418.1	FOR LAB USE ONLY	
52C-032294	soil	10:35 3-22-94	amber glass	(3) 60ml	ice 40	8015		
52C-032294	soil	10:35 3-22-94	amber glass	250 ml	ice 40	418.1	FOR LAB USE ONLY	
106F-032294	soil	12:25 3-22-94	amber glass	(3) 60ml	ice 40	8015	FOR LAB USE ONLY	
106F-032294	soil	12:25 3-22-94	amber glass	250ml	ice 40	418.1		
104E-032294	soil	11:55 3-22-94	amber glass	(3) 60ml	ice 40	8015	FOR LAB USE ONLY	
104E-032294	soil	11:55 3-22-94	amber glass	250ml	ice 40	418.1		
109F-032294	soil	12:10 3-22-94	amber glass	(3) 60ml	ice 40	8015	FOR LAB USE ONLY	
109F-032294	soil	12:10 3-22-94	amber glass	250ml	ice 40	418.1		
VOID	soil		amber glass	(3) 60ml	ice 40	8015	FOR LAB USE ONLY	
	soil		amber glass	250ml	ice 40	418.1		
	soil		amber glass	(3) 60ml	ice 40	8015	FOR LAB USE ONLY	
	soil		amber glass	250ml	ice 40	418.1		
	soil		amber glass	(3) 60ml	ice 40	8015	FOR LAB USE ONLY	
	soil		amber glass	250ml	ice 40	418.1		
	soil		amber glass	(3) 60ml	ice 40	8015	FOR LAB USE ONLY	
	soil		amber glass	250ml	ice 40	418.1		
	soil		amber glass	(3) 60ml	ice 40	8015	FOR LAB USE ONLY	
	soil		amber glass	250ml	ice 40	418.1		

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.





INTERNATIONAL  
TECHNOLOGY  
CORPORATION

ANALYSIS REQUEST AND  
CHAIN OF CUSTODY RECORD\*

Reference Document No. 417553  
Page 1 of 2

Project Name/No. 1 Fort Story 519029 Samples Shipment Date 7 3-22-94  
Sample Team Members 2 Demarco/Bernardo Lab Destination 8 IT Export  
Profit Center No. 3 3511 Lab Contact 9 Carrie Smith  
Project Manager 4 Tom Mathison Project Contact/Phone 12 T. Mathison (410) 372-7701  
Purchase Order No. 6 519029 Carrier/Waybill No. 13 9710126193  
Required Report Date 11 NTAT

Bill to: 5 Tom Mathison  
IT Corp  
2790 Mossdale Blvd  
Monroeville Pa 15146  
Report to: 10 Tom Mathison  
IT Corp  
2790 Mossdale Blvd  
Monroeville Pa 15146

ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
15A-032294	soil	11:25 3-22-94	amber glass	(3) 60ml	ice 40	8015		
15A-032294	soil	11:25 3-22-94	amber glass	250ml	ice 40	418.1		
57C-032294	soil	11:35 3-22-94	amber glass	60ml	ice 40	8015		
57C-032294	soil	11:35 3-22-94	amber glass	250ml	ice 40	418.1		
77D-032294	soil	10:10 3-22-94	amber glass	(3) 60ml	ice 40	8015		
77D-032294	soil	10:10 3-22-94	amber glass	250ml	ice 40	418.1		
62C-032294	soil	12:10 3-22-94	amber glass	(3) 60ml	ice 40	8015		
62C-032294	soil	12:10 3-22-94	amber glass	250ml	ice 40	418.1		

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐ 10 days

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify): \_\_\_\_\_

1. Relinquished by <sup>28</sup>

(Signature/Affiliation)

Date: 3/22/94

Time: 4:30

1. Received by <sup>28</sup>

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Comments: <sup>29</sup>

Write: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



Reference Document No.<sup>30</sup> 417 553  
Page 2 of 2

Samples Shipment Date 3-22-94

[illegible]

**\*See back of form for special instructions**



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

ANALYSIS REQUEST AND  
CHAIN OF CUSTODY RECORD\*

Reference Document No. 413609

Page 1 of 1

Project Name/No. FE. Story 519029 MRD LIMS 2482 Samples Shipment Date 3-23-94  
Sample Team Members Demarco / Bernardo Lab Destination MRD  
Profit Center No. 3 3511 Lab Contact 9  
Project Manager Tom Mathison Project Contact/Phone Tom Mathison (412) 372-7701  
Purchase Order No. 6 519029 Carrier/Waybill No. 13 9710126215  
Required Report Date 11 NTAT

Bill to: 5 Tom Mathison  
IT Corp  
2790 Mossdale Blvd  
Monroeville Pa 15146  
Report to: 10 Tom Mathison  
IT Corp  
2790 Mossdale Blvd  
Monroeville Pa 15146

ONE CONTAINER PER LINE

Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time <sup>16</sup> Collected	Container <sup>17</sup> Type	Sample <sup>18</sup> Volume	Pre- <sup>19</sup> servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
322D-032394	Soil	10:30 3-23-94	amber glass	(3) 100ml	ice 40	8015		
332D-032394	Soil	10:30 3-23-94	amber glass	250ml	ice 40	118.1		

FOR LAB  
USE ONLY

FOR LAB  
USE ONLY

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazardous ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐

Project Specific (specify): \_\_\_\_\_

1. Relinquished by <sup>28</sup>

(Signature/Affiliation)

Date: 3/23/94

Time: 4:30

1. Received by <sup>28</sup>

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Comments: <sup>29</sup>

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



**INTERNATIONAL  
TECHNOLOGY  
CORPORATION**

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. **113605**  
Page 1 of **1**

Project Name/No. **1 Fort Story 519029** Samples Shipment Date **MRD LIMS 2482 3-23-94**  
Sample Team Members **2 Demario / Bernardo** Lab Destination **8 MRD**  
Profit Center No. **3 3511** Lab Contact **9**  
Project Manager **4 Tom Mathison** Project Contact/Phone **12 T. Mathison**  
Purchase Order No. **6 519029** Carrier/Waybill No. **13 9710126215**  
Required Report Date **11 N/A**

Bill to: **5 Tom Mathison**  
**IT Corp**  
**2790 Mossy Blud**  
**Monroeville Pa 15146**  
Report to: **10 Tom Mathison**  
**IT Corp**  
**2790 Mossy Blud**  
**Monroeville Pa 15146**

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Preservative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
290B-032394	Soil	8:30 3-23-94	amber glass	(3) 60ml	ice 40	8015	<b>FOR LAB USE ONLY</b>	
290B-032394	Soil	8:30 3-23-94	amber glass	250ml	ice 40	1181		
285B-032394	Soil	9:20 3-23-94	amber glass	40ml	ice 40	8015		
285B-032394	Soil	9:30 3-23-94	amber glass	250ml	ice 40	4181		
							<b>FOR LAB USE ONLY</b>	

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (most)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☒ Project Specific (specify):

1. Relinquished by <sup>28</sup>

(Signature/Affiliation)

Date: **3/23/94**

Time: **4:50**

1. Received by <sup>28</sup>

(Signature/Affiliation)

Date:

Time:

2. Relinquished by

(Signature/Affiliation)

Date:

Time:

2. Received by

(Signature/Affiliation)

Date:

Time:

3. Relinquished by

(Signature/Affiliation)

Date:

Time:

3. Received by

(Signature/Affiliation)

Date:

Time:

Comments: <sup>29</sup>

Write: To accompany samples

Yellow: Field copy

\*See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. 413608

Page 1 of 2

Project Name/No. Fort Story 519029 Samples Shipment Date 7 3-23-94  
 Sample Team Members 2 Demarco / Bernardo Lab Destination IT Export  
 Profit Center No. 3 3511 Lab Contact Carrie Smith  
 Project Manager Tom Mathison Project Contact/Phone F. Mathison 412-372-701  
 Purchase Order No. 6 519029 Carrier/Waybill No. 13 145123686  
 Required Report Date 11 NAT

Bill to: Tom Mathison  
IT Corp  
2790 Moss side Blvd.  
Monroeville Pa 15146  
 Report to: Tom Mathison  
IT Corp  
2790 Moss side Blvd.  
Monroeville Pa 15146

## ONE CONTAINER PER LINE

Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time <sup>16</sup> Collected	Container <sup>17</sup> Type	Sample <sup>18</sup> Volume	Pre- <sup>19</sup> servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
275B-032394	Soil	11:00 3-23-94	amber (3) glass	60ml	ice 40	8015	FOR LAB USE ONLY	
275B-032394	Soil	11:00 3-23-94	amber glass	250ml	ice 40	418.1		
270A-032394	Soil	11:20 3-23-94	amber glass	100ml	ice 40	8015		
270A-032394	Soil	11:20 3-23-94	amber glass	250ml	ice 40	418.1		
312C-032394	Soil	11:40 3-23-94	amber glass	100ml	ice 40	8015	FOR LAB USE ONLY	
312C-032394	Soil	11:40 3-23-94	amber glass	250ml	ice 40	418.1		
354E-032394	Soil	11:50 3-23-94	amber (3) glass	100ml	ice 40	8015		
354E-032394	Soil	11:50 3-23-94	amber glass	250ml	ice 40	418.1		

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐ 10 days

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by <sup>28</sup>  
(Signature/Affiliation) Tom Mathison

Date: 3/23/94  
Time: 4:30

1. Received by <sup>28</sup>  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Comments: <sup>29</sup>

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.<sup>30</sup> 43608  
Page 2 of 2

Project Name Fl. Story

Project No. 514029

Samples Shipment Date 3-23-94

## ONE CONTAINER PER LINE

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
317D-032394	Soil	12:00 3-23-94	amber glass	(3) 60ml	ice 40	8015	FOR LAB USE ONLY	
317D-032394	Soil	12:00 3-23-94	amber glass	250ml	ice 40	418.1		
359F-032394	Soil	12:15 3-23-94	amber glass	(3) 60ml	ice 40	8015		
359F-032394	Soil	12:15 3-23-94	amber glass	250ml	ice 40	418.1	FOR LAB USE ONLY	
273A-032394	Soil	12:10 3-23-94	amber glass	(3) 60ml	ice 40	8015		
273A-032394	Soil	12:10 3-23-94	amber glass	250ml	ice 40	418.1		
35C-032394	Soil	12:40 3-23-94	amber glass	(3) 60ml	ice 40	8015	FOR LAB USE ONLY	
35C-032394	Soil	12:40 3-23-94	amber glass	250ml	ice 40	418.1		
357E-032394	Soil	12:35 3-23-94	amber glass	(3) 60ml	ice 40	8015		
357E-032394	Soil	12:35 3-23-94	amber glass	250ml	ice 40	418.1	FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. **413604**  
Page 1 of 2

Project Name/No. 1 Fort Story 519029  
Sample Team Members 2 Demarco / Bernardo  
Profit Center No. 3 3511  
Project Manager 4 Tom Mathison  
Purchase Order No. 6 519029  
Required Report Date 11 W T A T

Samples Shipment Date 7 3-23-94  
Lab Destination 8 IT Export  
Lab Contact 9 Carrie Smith  
Project Contact/Phone 12 T. Mathison (412) 372-7701  
Carrier/Waybill No. 13 1415123686

Bill to: 5 Tom Mathison  
2790 Mossdale Blvd  
Monroeville PA 15146  
c/o IT Corp  
Report to: 10 Tom Mathison  
IT Corp  
2790 Mossdale Blvd  
Monroeville PA 15146

## ONE CONTAINER PER LINE

Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time <sup>16</sup> Collected	Container <sup>17</sup> Type	Sample <sup>18</sup> Volume	Pre- <sup>19</sup> servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
294B-032394	soil	7:15 3-23-94	amber glass	(3) 60ml	ice 4°	8015	FOR LAB USE ONLY	
294B-032394	soil	7:15 3-23-94	amber glass	250ml	ice 4°	418.1		
336D-032394	soil	7:15 3-23-94	amber glass	60ml	ice 4°	8015		
336D-032394	soil	7:15 3-23-94	amber glass	250ml	ice 4°	418.1		
378F-032394	soil	7:40 3-23-94	amber glass	(3) 60ml	ice 4°	8015	FOR LAB USE ONLY	
378F-032394	soil	7:40 3-23-94	amber glass	250ml	ice 4°	418.1		
255A-032394	soil	7:40 3-23-94	amber glass	(3) 60ml	ice 4°	8015		
255A-032394	soil	7:40 3-23-94	amber glass	250ml	ice 4°	418.1		

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐ 10 days

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify): \_\_\_\_\_

1. Relinquished by <sup>28</sup>  
(Signature/Affiliation)

Carrie Smith

Date: 3/23/94  
Time: 4:30

1. Received by <sup>28</sup>  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Comments: <sup>29</sup>

Write: To accompany samples

Yellow: Field copy

\*See back of form for special instructions



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.<sup>30</sup> 413684  
Page 2 of 2

Project Name Fört Story

Project No. 519029

Samples Shipment Date 3-23-94

## ONE CONTAINER PER LINE

[illegible]

White: 10 accompany samples

**Yellow: Field copy**

**\*See back of form for special instructions**





**INTERNATIONAL  
ANALYTICAL  
CORPORATION**

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No. **113606**  
Page 1 of **2**

Project Name/No. **Fort Story 519029**  
Sample Team Members **2**  
Profit Center No. **3 3511**  
Project Manager **4 Tom Mathison**  
Purchase Order No. **6 519029**  
Required Report Date **11**

Samples Shipment Date **7 3-23-94**  
Lab Destination **8 IT Corp Export**  
Lab Contact **9 Carrie Smith**  
Project Contact/Phone **12 Tom Mathison 412-372-7701**  
Carrier/Waybill No. **13 1451223686**

Bill to: **5 Tom Mathison**  
**IT Corp**  
**2790 Mossdale Blvd**  
**Monroeville Pa 15146**  
Report to: **10 Tom Mathison**  
**IT Corp**  
**2790 Mossdale Blvd**  
**Monroeville Pa 15146**

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
332D-032394	Soil	8:40 3-23-94	amber glass	(3) 60ml	ice 40	8015		
332D-032394	Soil	8:40 3-23-94	amber glass	250ml	ice 40	418.1		
374F-032394	Soil	9:00 3-23-94	amber glass	60ml	ice 40	8015		
374F-032394	Soil	9:00 3-23-94	amber glass	250ml	ice 40	418.1		
260A-032394	Soil	9:00 3-23-94	amber glass	60ml	ice 40	8015		
260A-032394	Soil	9:00 3-23-94	amber glass	250ml	ice 40	418.1		
302C-032394	Soil	9:15 3-23-94	amber glass	(3) 60ml	ice 40	8015		
302C-032394	Soil	9:15 3-23-94	amber glass	250ml	ice 40	418.1		

Special Instructions: **23**

Possible Hazard Identification: **24**

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: **25**

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: **26**

Normal ☒ Rush ☐

**10 days**

QC Level: **27**

I. ☐ II. ☐ III. ☐

Project Specific (specify): \_\_\_\_\_

1. Relinquished by **28**  
(Signature/Affiliation) *Tom Mathison*

Date: **3/22/94**  
Time: **4:10**

1. Received by **28**  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Comments: **29**

Write: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.<sup>30</sup> 13606  
Page 2 of 2

Project Name Fort Story

Project No. 519029

Samples Shipment Date 3-23-94

## ONE CONTAINER PER LINE

[illegible]

**White: To accompany samples**

**Yellow: Field copy**

**\*See back of form for special instructions**



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD \*

Reference Document No. 113607  
Page 1 of 2

Project Name/No. Fort Story 519029 Samples Shipment Date 7 3-23-94  
Sample Team Members 2 De Marco / Bernardo Lab Destination 8 IT Export  
Profit Center No. 3 3511 Lab Contact 9 Carri Smith  
Project Manager 4 Tom Mathison Project Contact/Phone 12 T. Mathison (412) 372-7701  
Purchase Order No. 6 519029 Carrier/Waybill No. 13 1415123686  
Required Report Date 11

Bill to: 5 Tom Mathison  
IT Corp  
2790 Massie Blvd  
monroeville Pa 15146  
Report to: 10 Tom Mathison  
IT Corp  
2790 Massie Blvd  
monroeville Pa 15146

## ONE CONTAINER PER LINE

Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time <sup>16</sup> Collected	Container <sup>17</sup> Type	Sample <sup>18</sup> Volume	Pre- <sup>19</sup> servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
369F-032394	soil	3-23-94 9:40	amber glass	(3) 60ml	ice 4°	8015	FOR LAB USE ONLY	
36AF-032394	soil	3-23-94 9:40	amber glass	250ml	ice 4°	418.1		
365A-032394	soil	3-23-94 9:40	amber glass	60ml	ice 4°	8015		
365A-032394	soil	3-23-94 9:40	amber glass	250ml	ice 4°	418.1		
307C-032394	soil	3-23-94 10:10	amber glass	(3) 60ml	ice 4°	8015	FOR LAB USE ONLY	
307C-032394	soil	3-23-94 10:10	amber glass	250ml	ice 4°	418.1		
349E-032394	soil	3-23-94 10:10	amber glass	(3) 60ml	ice 4°	8015		
349E-032394	soil	3-23-94 10:10	amber glass	250ml	ice 4°	418.1		

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazardous ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mbis.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐ 10 days

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by <sup>28</sup>  
(Signature/Affiliation)

Date: 3/23/94  
Time: 4:30

1. Received by <sup>28</sup>  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Comments: <sup>29</sup>

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

**ANALYSIS REQUEST AND  
CHAIN OF CUSTODY RECORD (cont.)\***

Reference Document No. 3407  
Page 2 of 2

Project Name Fort Story

Project No. 519029

Samples Shipment Date 3-23-94

**ONE CONTAINER PER LINE**

Sample 14 Number	Sample 15 Description/Type	Date/Time Collected 16	Container Type 17	Sample 18 Volume	Pre-19 servative	Requested Testing Program 20	Condition on Receipt 21	Disposal 22 Record No.
280B-032394	Soil	10:20 3-23-94	amber glass	(3) 60ml	ice 4°	8015		
280B-032394	Soil	10:20 3-23-94	amber glass	250ml	ice 4°	418.1	FOR LAB USE ONLY	
322D-032394	Soil	10:30 3-23-94	amber glass	(3) 60ml	ice 4°	8015		
322D-032394	Soil	10:30 3-23-94	amber glass	250ml	ice 4°	418.1		
364F-032394	Soil	10:30 3-23-94	amber glass	(3) 60ml	ice 4°	8015	FOR LAB USE ONLY	
322D DUPO32394	Soil	10:30 3-23-94	amber glass	(3) 60ml	ice 4°	8015		
322D DUPO32394	Soil	10:30 3-23-94	amber glass	250ml	ice 4°	418.1		
364F-032394	Soil	10:30 3-23-94	amber glass	250ml	ice 4°	418.1	FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	

COPY

White: To accompany samples  
Yellow: Field copy  
\* See back of form for special instructions.



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CORPORATION

ANALYSIS REQUEST AND  
CHAIN OF CUSTODY RECORD\*

Reference Document No. 413614  
Page 1 of 2

Project Name/No. Fort Story 519029 Samples Shipment Date 7 3-24-94  
Sample Team Members 2 DeMarco/Bernardo Lab Destination 8 IT Export  
Profit Center No. 3 3511 Lab Contact 9 Carrie Smith  
Project Manager 4 Tom Mathison Project Contact/Phone 4a T. Mathison (412) 372-7701  
Purchase Order No. 6 519029 Carrier/Waybill No. 13 1451223690  
Required Report Date 11 normal TAT

Bill to: 5 Tom Mathison  
IT Corp  
2790 Moss Side Blvd  
Monroeville Pa 15146  
Report to: 10 Tom Mathison  
IT Corp  
2790 Moss Side Blvd.  
Monroeville Pa 1514

ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
400B-032494	Soil	11:15 3-24-94	amber glass	(3) 60ml	ice 4°	8015		
400B-032494	↑	11:15 3-24-94	↑	250ml	↑	418.1	FOR LAB USE ONLY	
442D-032494		11:20 3-24-94		(60ml)		8015		
442D-032494		11:30 3-24-94		250ml		418.1		
403B-032494		11:30 3-24-94		(3) 60ml		8015		
403B-032494		11:30 3-24-94		250ml		418.1	FOR LAB USE ONLY	
445D-032494		11:30 3-24-94		(3) 60ml		8015		
445D-032494	Soil	11:30 3-24-94	amber glass	250ml	ice 4°	418.1		

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐ 10 days

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify): \_\_\_\_\_

1. Relinquished by <sup>28</sup>  
(Signature/Affiliation)

*David Berner*

Date: 3/24/94  
Time: 4:30

1. Received by <sup>28</sup>  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Comments: <sup>29</sup>

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.<sup>30</sup> 113 614  
Page 2 of 2

Project Name Fort Story

Project No. 519029

Samples Shipment Date 3-24-94

## ONE CONTAINER PER LINE

[illegible]

**White: To accompany samples**

**Yellow: Field copy**

**\*See back of form for special instructions**



**INTERNATIONAL  
TECHNOLOGY  
CORPORATION**

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. **113610**  
Page 1 of **2**

Project Name/No. **1 Fort Story 519029**  
Sample Team Members **2 Demarco / Burnside**  
Profit Center No. **3 3511**  
Project Manager **4 Tom Mathison**  
Purchase Order No. **6 519029**  
Required Report Date **11 Normal TAT**

Samples Shipment Date **7 3-24-94**  
Lab Destination **8 IT Export**  
Lab Contact **9 Carrie Smith**  
Project Contact/Phone **12 T. Mathison (412) 372-7701**  
Carrier/Waybill No. **13 1451233690**

Bill to: **5 Tom Mathison**  
**IT Corp**  
**2790 Mossdale Blvd.**  
**Monroeville Pa 15146**  
Report to: **10 Tom Mathison**  
**IT Corp**  
**2790 Mossdale Blvd**  
**Monroeville Pa 15146**

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
370A-032494	soil	8:00 3-24-94	amber glass	(3) 100ml	ice 40	8015		
378A-032494	soil	8:00 3-24-94	amber glass	250ml	ice 40	78.1		
421C-032494	soil	8:15 3-24-94	amber glass	250ml	ice 40	8015		
421C-032494	soil	8:15 3-24-94	amber glass	250ml	ice 40	418.1		
418B-032494	soil	8:15 3-24-94	amber glass	250ml	ice 40	8015		
418B-032494	soil	8:15 3-24-94	amber glass	250ml	ice 40	418.1		
393A-032494	soil	8:27 3-24-94	amber glass	(3) 100ml	ice 40	8015		
393A-032494	soil	8:27 3-24-94	amber glass	250ml	ice 40	418.1		

Special Instructions: **23**

Possible Hazard Identification: **24**

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: **25**

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: **26**

Normal ☒ Rush ☐ **10 days**

QC Level: **27**

I. ☐ II. ☐ III. ☐ Project Specific (specify): \_\_\_\_\_

1. Relinquished by **28**

(Signature/Affiliation)

Date: **3/24/94**

Time: **2:15**

1. Received by **28**

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Comments: **29**

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.<sup>30</sup> 413610  
Page 2 of 2

Project Name Fort Story

Project No. 519029

Samples Shipment Date 3-24-94

## ONE CONTAINER PER LINE

[illegible]

White: To accompany samples

Yellow: Field copy

\*See back of form for special instructions





INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. 413612  
Page 1 of 1

Project Name/No. Fort Story 519029 Samples Shipment Date MRD LIMS 2482 3-24-94  
Sample Team Members 2 DeMarco | Bernardo Lab Destination 8 MRD  
Profit Center No. 3 3511 Lab Contact 9  
Project Manager 4 Tom Mathison Project Contact/Phone 12 Tom Mathison (412) 372-7701  
Purchase Order No. 6 519029 Carrier/Waybill No. 13 1451223675  
Required Report Date 11 normal TAT

Bill to: 5 Tom Mathison  
IT Corp  
2790 Mosside Blvd  
Monroeville Pa 15146  
Report to: 10 Tom Mathison  
IT Corp  
2790 Mosside Blvd  
Monroeville Pa 15146

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
465D-032494	Soil	9:21 3-24-94	amber glass	3) 60ml	ice 4°	8015	FOR LAB USE ONLY	
465D-032494	Soil	9:21 3-24-94	amber glass	250ml	ice 4°	418.1		
430C-032494	Soil	9:35 3-24-94	amber glass	60ml	ice 4°	8015		
430C-032494	Soil	9:35 3-24-94	amber glass	250ml	ice 4°	418.1		
477E-032494	Soil	10:50 3-24-94	amber glass	3) 60ml	ice 4°	8015	FOR LAB USE ONLY	
477E-032494	Soil	10:50 3-24-94	amber glass	250ml	ice 4°	418.1		

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐

Project Specific (specify): \_\_\_\_\_

1. Relinquished by <sup>28</sup>  
(Signature/Affiliation)

Date: 3/24/94  
Time: 4:30

1. Received by <sup>28</sup>  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Comments: <sup>29</sup>

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

ANALYSIS REQUEST AND  
CHAIN OF CUSTODY RECORD\*

Reference Document No. 113611  
Page 1 of 2

Project Name/No. <sup>1</sup> Fort Story 519029  
Sample Team Members <sup>2</sup> Demarco Bernado  
Profit Center No. <sup>3</sup> 3511  
Project Manager <sup>4</sup> Tom Mathison  
Purchase Order No. <sup>6</sup> 519029  
Required Report Date <sup>11</sup> normal TAT

Samples Shipment Date <sup>7</sup> 3-24-94  
Lab Destination <sup>8</sup> IT Export  
Lab Contact <sup>9</sup> Carrie Smith  
Project Contact/Phone <sup>12</sup> T Mathison (412) 377-7791  
Carrier/Waybill No. <sup>13</sup> 1451223690

Bill to: <sup>5</sup> Tom Mathison  
IT Corp  
2790 Massside Blvd.  
Monroeville Pa 15146  
Report to: <sup>10</sup> Tom Mathison  
IT Corp  
2790 Massside Blvd  
Monroeville

ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
413B-032494	soil	3-24-94 9:00	amber glass	(3) 100ml	ia 40	8015		
413B-032494	soil	3-24-94 9:00	amber glass	250ml	ia 40	418.1		
388A-032494	soil	3-24-94 9:17	amber glass	100ml	ia 40	8015		
398A-032494	soil	3-24-94 9:21	amber glass	250ml	ia 40	418.1		
455D-032494	soil	3-24-94 9:21	amber glass	(3) 100ml	ia 40	8015		
455D-032494	soil	3-24-94 9:21	amber glass	250ml	ia 40	418.1		
455DDUP-032494	soil	3-24-94 9:21	amber glass	(3) 100ml	ia 40	8015		
455DDUP-032494	soil	3-24-94 9:21	amber glass	250ml	ia 40	418.1		

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐

Project Specific (specify): \_\_\_\_\_

1. Relinquished by <sup>28</sup>

(Signature/Affiliation)

Date: 3/24/94

Time: 4:30

1. Received by <sup>28</sup>

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Comments: <sup>29</sup>

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.<sup>30</sup> 13611  
Page 2 of 2

Project Name Fort Story

Project No. 519029

Samples Shipment Date 3-24-94

## ONE CONTAINER PER LINE

[illegible]

**White:** To accompany samples

**Yellow: Field copy**

**\*See back of form for special instructions**



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. **413613**  
Page 1 of **2**

Project Name/No. **1 Fort Story 519029**  
Sample Team Members **2 DeMarco/Bernardo**  
Profit Center No. **3 3511**  
Project Manager **4 Tom Mathison**  
Purchase Order No. **6 519029**  
Required Report Date **11 Normal TAT**

Samples Shipment Date **7 3-24-94**  
Lab Destination **8 IT Export**  
Lab Contact **9 Carrie Smith**  
Project Contact/Phone **12 T. Mathison (40) 373-7791**  
Carrier/Waybill No. **13 1451223690**

Bill to: **5 Tom Mathison**  
**IT Corp**  
**2790 Moss Side Blvd**  
**Monroeville Pa 15146**  
Report to: **10 Tom Mathison**  
**IT Corp**  
**2790 Moss Side Blvd**  
**Monroeville Pa 15146**

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
450D-032494	Soil	10:10 3-24-94	amber glass	(3) (60ml)	ice 40	8015	<b>FOR LAB USE ONLY</b>	
450D-032494	Soil	10:10 3-24-94	-	250ml	ice 40	418.1		
492F-032494		10:13 3-24-94		(60ml)	ice 40	8015		
492F-032494		10:13 3-24-94		250ml	ice 40	418.1		
393A-032494		10:12 3-24-94		(3) (60ml)	ice 40	8015	<b>FOR LAB USE ONLY</b>	
393A-032494		10:21 3-24-94		250ml	ice 40	418.1		
435C-032494		10:38 3-24-94		(3) (60ml)	ice 40	8015		
435C-032494		10:38 3-24-94		250ml	ice 40	418.1		

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐ **10 days**

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify): \_\_\_\_\_

1. Relinquished by <sup>28</sup>

(Signature/Affiliation) **Tomie Bernard**

Date: **3/24/04**

Time: **4:30**

1. Received by <sup>28</sup>

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Comments: <sup>29</sup>

Write: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.) \*

Page 2 of 2

Samples Shipment Date 3-24-94

## ONE CONTAINER PER LINE

[illegible]

**\*See back of form for special instructions**



INTERNATIONAL  
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CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document Number **75796**  
Page 1 of 2

Project Name/No. Fort Story 519029 Samples Shipment Date 7 3-25-94  
Sample Team Members 2 DeMarco/Bernardo Lab Destination 8 IT Export  
Profit Center No. 3 3511 Lab Contact 9 Carrie Smith  
Project Manager Tom Mathison Project Contact/Phone 12 F. Mathison (412) 372-7701  
Purchase Order No. 6 519029 Carrier/Waybill No. 13 9626951854  
Required Report Date 11 Normal TAT

Bill to: Tom Mathison  
IT Corp  
2790 Mossyde Blvd  
Monroeville Pa 15146  
Report to: Tom Mathison  
IT Corp  
2790 Mossyde Blvd  
Monroeville Pa 15146

## ONE CONTAINER PER LINE

Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time <sup>16</sup> Collected	Container <sup>17</sup> Type	Sample <sup>18</sup> Volume	Pre- <sup>19</sup> servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
53205 32894	Soil	9:15 3-28-94	amber glass	(3) 60ml	IC 40	8015		
5546 32894		9:20 3-28-94		250ml		418.1		
572A 32894		10:00 3-28-94		60ml		8015		
572A 32894		10:00 3-28-94		60ml		418.1		
621F 32894		10:10 3-28-94		(3) 60ml		8015		
621F 32894		10:10 3-28-94		250ml		418.1		
579D 32894		10:20 3-28-94		(3) 60ml		8015		
579D 32894	Soil	10:20 3-28-94	amber glass	250ml	IC 40	418.1		

Special Instructions: <sup>23</sup> bottles were taken 3/28/94 3 bottles date on bottles are 3/25/94

Possible Hazard Identification: <sup>24</sup>

Non-hazardous ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by <sup>28</sup>

(Signature/Affiliation)

*Donnie Bane*

Date: 3/29/94

Time: 4:20

1. Received by <sup>28</sup>

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Comments: <sup>29</sup>

Write: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No. 30 15796  
Page 2 of 2

Project Name Ft. Story

Project No. 519029

Samples Shipment Date 3/28/94

## ONE CONTAINER PER LINE

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
537 B 32894	Soil	10:30 3/28/94	Glass Amber	(3) 60ml	10 40	8015		
537 B 32894		10:30 3/28/94		250ML (3)		418.1	FOR LAB USE ONLY	
537 B Dup 32894		10:30 3/28/94		20ML (3)		8015	FOR LAB USE ONLY	
537 B Dup 32894		10:30 3/28/94		250ML (3)		418.1	FOR LAB USE ONLY	
601 E 32894		10:40 3/28/94		60ML (3)		8015	FOR LAB USE ONLY	
601 E 32894		11:00 3/28/94		250ML (3)		418.1	FOR LAB USE ONLY	
559 C 32894		11:00 3/28/94		60ML (3)		8015	FOR LAB USE ONLY	
559 C 32894		11:00 3/28/94		250ML (3)		418.1	FOR LAB USE ONLY	
517 A 32894		11:10 3/28/94		20ML (3)		8015	FOR LAB USE ONLY	
517 A 32894		11:10 3/28/94		250ML (3)		418.1	FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	

COPY

White: To accompany samples  
Yellow: Field copy  
\* See back of form for special instructions.



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CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. **113617**  
Page 1 of **2**

Project Name/No. **1 Ft. Story 519029** Samples Shipment Date **7 3/28/94**  
Sample Team Members **2 DeMarco/Bernard** Lab Destination **8 ITEXPORT**  
Profit Center No. **3 3511** Lab Contact **9 Carrie Smith**  
Project Manager **4 Tom Mathison** Project Contact/Phone **12 T. Mathison**  
Purchase Order No. **6 519029** Carrier/Waybill No. **13 9626951854**  
Required Report Date **11 Normal**

Bill to: **5 Tom Mathison**  
**ITT Corp**  
**2790 Mosside Blvd,**  
**Monroeville, PA 15146**  
Report to: **10 SAME**

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Preservative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
567C-32894	Soil	180 3/28/94	Amber glass	(3) 60ml	ICE	8015		
567C-32894		130 3/28/94		250ml		418.1		
611F-32894		145 3/28/94		60ml		8015		
611F-32894		155 3/28/94		60ml		418.1		
609E-32894		200 3/28/94		60ml		8015		
609E-32894		210 3/28/94		250ml		418.1		
525A-32894		210 3/28/94		60ml		8015		
525A-32894	Soil	210 3/28/94		250ml		418.1		

Special Instructions: **23 Samplers were taken 3/28/94 bottles dated are 3/25/94**

Possible Hazard Identification: **24**  
Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐  
Sample Disposal: **25**  
Return to Client ☐ Disposal by Lab ☐ Archive ☐ (mos.)

Turnaround Time Required: **26**  
Normal ☒ Rush ☐  
QC Level: **27**  
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by <b>28</b> (Signature/Affiliation) <b>Douie Bernard</b>	Date: <b>3/28/94</b> Time: <b>4:30</b>	1. Received by <b>28</b> (Signature/Affiliation)	Date: _____ Time: _____
2. Relinquished by (Signature/Affiliation)	Date: _____ Time: _____	2. Received by (Signature/Affiliation)	Date: _____ Time: _____
3. Relinquished by (Signature/Affiliation)	Date: _____ Time: _____	3. Received by (Signature/Affiliation)	Date: _____ Time: _____

Comments: **29**

White: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.





## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.<sup>30</sup> 113617  
Page 2 of 2

Project Name F4. Story

Project No. 519029

Samples Shipment Date 3/28/94

## ONE CONTAINER PER LINE

[illegible]

**White: To accompany samples**

**Yellow: Field copy**

**\*See back of form for special instructions**

MC



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document Number 75793  
Page 1 of 1

Project Name/No. 1st Story 519029  
Sample Team Members 2 Demarco/Bernardo  
Profit Center No. 3 3511  
Project Manager 4 Tom Mathison  
Purchase Order No. 6 519029  
Required Report Date 11 Normal TAT

MRD Lims 2482  
Samples Shipment Date 7  
Lab Destination 8 MRD  
Lab Contact 9  
Project Contact/Phone 10 Mathison (412) 372-7201  
Carrier/Waybill No. 13 9626951865

Bill to: 5 Tom Mathison  
ITT Corp  
2790 Moss Side Blvd  
Monroeville Pa 15146  
Report to: Tom Mathison  
ITT Corp  
2790 Moss Side Blvd  
Monroeville Pa 15146

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
588D 32894	Soil	3/28/94	amber glass	(3) 60ml	ice 40	8015	FOR LAB USE ONLY	
588D 32894		3/28/94		250ml		418.1		
537B 32894		3/28/94		60ml		8015		
537B 32894		3/28/94		250ml		418.1		
569D 32894		3/28/94		60ml		8015	FOR LAB USE ONLY	
569D 32894		3/28/94		250ml		418.1		
532B-32894		3/28/94		60ml		8015		
572D-32894	Soil	3/28/94	amber glass	250ml	ice 40	418.1		

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazardous ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by <sup>28</sup>  
(Signature/Affiliation) Donio Bernar...

Date: 3/28/94  
Time: 4:50

1. Received by <sup>28</sup>  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Comments: <sup>29</sup>

Write: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document N 75795  
Page 1 of 2

Project Name/No. Fort Story 519029 Samples Shipment Date 7 3-28-94  
Sample Team Members 2 Demarco / Bernardo Lab Destination 8 IT Export  
Profit Center No. 3 3511 Lab Contact 9 Carrie Smith  
Project Manager 4 T. Mathison Project Contact/Phone 19 T. Mathison  
Purchase Order No. 6 519029 Carrier/Waybill No. 13 9026951854  
Required Report Date 11 Normal TAT

Bill to: 5 Tom Mathison  
IT Corp  
2790 Mossdale Blvd.  
Monroeville Pa 15146

Report to: 10 Tom Mathison  
IT Corp  
2790 Mossdale Blvd.  
Monroeville Pa 15146

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre- servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
676F-32894	Soil	12:20 3-28-94	amber glass	(3) (2)ml	ice 40	8015		
616F-32894		12:20 3-28-94		250ml		418.1		
574D-32894		12:30 3-28-94		(2) (2)ml		8015		
574D-32894		12:30 3-28-94		(2) (2)ml		118.1		
522A-32894		12:30 3-28-94		(3) (2)ml		8015		
522A-32894		12:30 3-28-94		250ml		418.1		
527B-32894		12:30 3-28-94		(3) (2)ml		8015		
527B-32894	Soil	12:30 3-28-94	amber glass	250ml	ice 40	418.1		

Special Instructions: <sup>23</sup> Samples were taken 3/28/94 bottle date are 3/28/94

Possible Hazard Identification: <sup>24</sup>

Non-hazardous ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal ☒ Rush ☐

QC Level: <sup>27</sup>

I. ☐ II. ☐ III. ☐

Project Specific (specify):

1. Relinquished by <sup>28</sup>

(Signature/Affiliation)

Donald Beumer

Date: 3/28/94

Time: 4:30

1. Received by <sup>28</sup>

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

2. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Relinquished by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

3. Received by

(Signature/Affiliation)

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Comments: <sup>29</sup>

Write: To accompany samples

Yellow: Field copy

\* See back of form for special instructions.



## ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)\*

Reference Document No.<sup>30</sup> 75795  
Page 2 of 2

Project Name Ft. Story

Project No. 519029

Samples Shipment Date 3/28/94

## ONE CONTAINER PER LINE

[illegible]

**White: To accompany samples**

**Yellow: Field copy**

**\*See back of form for special instructions**



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. **113615**  
Page 1 of **2**

Project Name/No. **1 Fort Story 510-28** Samples Shipment Date **7 3-28-94**  
Sample Team Members **2 DeMarco/Barward** Lab Destination **8 IT Export**  
Profit Center No. **3 3511** Lab Contact **9 Carrie Smith**  
Project Manager **4 Tom Mathison** Project Contact/Phone **12 T. Mathison (412) 2701**  
Purchase Order No. **6 519029** Carrier/Waybill No. **13 9026951854**  
Required Report Date **11 Normal/MTAT**

Bill to: **5 Tom Mathison**  
**IT Corp**  
**2790 Massside Blvd**  
**Monroeville Pa 15146**  
Report to: **10 Tom Mathison**  
**SAME**

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
630F-022894	Soil	7:20 3-24-94	Amber glass	(3) 60ml	40	8015		
1030F-032894		7:40 3-28-94		25ml	40	418.1	FOR LAB USE ONLY	
588D-032894		7:50 3-28-94		60ml		8015		
588D-032894		8:00 3-28-94		25ml		418.1		
588D-Dup 32894		8:10 3-28-94		(3) 250ml		8015	FOR LAB USE ONLY	
588D-Dup 32894		9:20 3-28-94		250ml		418.1		
546B-32894		8:30 3-28-94		(3) 60ml		8015		
546B-32894	Soil	8:30 3-28-94		250ml		418.1		

Special Instructions: **23 bottles with 3/25/94 were taken on 3/28/94**

Possible Hazard Identification: **24**

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: **25**

Return to Client ☐ Disposal by Lab ☐ Archive ☐ (mos.)

Turnaround Time Required: **26**

Normal ☒ Rush ☐

QC Level: **27**

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by **28**

(Signature/Affiliation)

*Debra Benner*

Date: **3/28/94**

Time:

1. Received by **28**

(Signature/Affiliation)

Date:

Time:

2. Relinquished by

(Signature/Affiliation)

Date:

Time:

2. Received by

(Signature/Affiliation)

Date:

Time:

3. Relinquished by

(Signature/Affiliation)

Date:

Time:

3. Received by

(Signature/Affiliation)

Date:

Time:

Comments: **29**

Write: To accompany samples

Yellow: Field copy

\* See back of form for special instructions



## **CHEMICAL QUALITY ASSURANCE REPORT**



DEPARTMENT OF THE ARMY  
MISSOURI RIVER DIVISION, CORPS OF ENGINEERS  
P.O. BOX 103, DOWNTOWN STATION  
OMAHA, NEBRASKA 68101-0103



REPLY TO  
ATTENTION OF

CEMRD-ED-L (200)

26 Jul 94

MEMORANDUM FOR Commander, US Army Engineer District, Omaha,  
ATTN: CEMRO-ED-ER (Jeff Hubbard)

SUBJECT: Fort Story Larc Area, Virginia Beach, VA, Chemical  
Quality Assurance Report

1. This is in response to the request from the Omaha District for quality assurance testing.
2. Enclosed is a copy of the Chemical Quality Assurance Report, SAB.
3. The Contractor for this project was International Technology (IT) Corporation of Monroeville, PA. The laboratory was IT Analytical Services (ITAS) of Austin, TX.
4. The Contractor's data met the HTW reporting requirements. Refer to the attached report for the quality assurance review.
5. No data discrepancies were noted.
6. The Quality Assurance raw data report was sent under separate cover on or about 26 Jul 94.
7. If there are any questions or comments, please call Laura Percifield, (402) 444-4304.

FOR THE COMMANDER:

*Douglas B. Taggart*

Encl  
CQA Report

DOUGLAS B. TAGGART  
Director, MRD Laboratory

CF:  
CEMRD-ED-EC

CEMP-RT (Ballif)



DEPARTMENT OF THE ARMY  
MISSOURI RIVER DIVISION, CORPS OF ENGINEERS  
DIVISION LABORATORY  
OMAHA, NEBRASKA 68102

27 JUL 1994

Subject: Chemical Quality Assurance Report

Project: Fort Story Larc Area, Virginia Beach, VA

Intended Use: IRP-Army RA

Source of Material: \_\_\_\_\_

Submitted by: Jeff Hubbard, CEMRO-ED-ER

Date Sampled: 22-28 Mar 94, Date Received: 23-29 Mar 94

Method of Test or Specification: See attached tables 001 - 012.

References: Omaha District Request No. ENE 9577 dated 23 Nov 92

-- REMARKS --

1. CONTRACTOR DATA EVALUATION: The contract laboratory (IT Analytical Services of Austin, TX) performed the analysis using EPA methods. Proper quality control procedures were followed and documented. The data for all parameters met the USACE HTW minimum chemistry reporting requirements as specified in ER 1110-1-263 (dated 1 Oct 90).

The Contractor provided chemical analytical results for 132 soil sample which were analyzed in the following manner:

- 132 soil samples for total petroleum hydrocarbons (TPH) by a modified EPA method 8015.
  - 33 soil samples for total recoverable petroleum hydrocarbons (TRPH) by EPA method 418.1.
- a. ACCURACY: Factors indicating the accuracy of the Contractor's data include:
    - 1) Surrogate spike (either o-terphenyl or benzo(a)pyrene with an acceptance range of 60-150%) recoveries which for TPH gasoline were within acceptable limits and for diesel were not reported for 23 samples and one method blank because of matrix interferences, were diluted out for 6 samples, and were low for 19 samples, 1 method blank and 2 blank spikes.

JP 7-26-94  
Percifield/glm/444-4313

- 2) Matrix spike/matrix spike duplicate (MS/MSD) recoveries which for:
    - a) TPH gasoline were within acceptable limits and for TPH diesel were within acceptable limits for two of nine batches. The recoveries for the other seven diesel batches ranged from 240% to 12000%.
    - b) TRPH were within acceptable limits.
  - 3) Blank spike (BS) recoveries which for:
    - a) TPH were within acceptable limits.
    - b) TRPH were not reported.
  - b. PRECISION: Factors indicating the precision of the Contractor's data include:
    - 1) Relative percent differences (RPD) for MS/MSD which for:
      - a) TPH were within acceptable limits.
      - b) TRPH were within acceptable limits.
    - 2) RPD for BS were not reported.
    - 3) Laboratory duplicates were not reported.
  - c. LABORATORY CONTAMINANTS: Method blank results for:
    - 1) TPH: Five method blanks contained any were from 7.2 mg/kg to 22 mg/kg TPH.
    - 2) TRPH: No contaminants were reported.
  - d. HOLDING TIMES: Holding times were for all samples except one TPH analysis in which the sample extract arrived at IT Austin dry.
2. QA/QC COMPARISON: Split and/or duplicate samples were submitted to MRD Laboratory for analysis. Comparison of the quality assurance (QA) and contractor test results are presented in tables 001-012. No data discrepancies were noted. The QA Laboratory detected a lubricating-type oil in the majority of the samples analyzed, but the TPH was quantified to C<sub>25</sub> and a lubricating-type oil is greater than C<sub>25</sub>.
3. OBSERVATIONS:
- a. Many TPH surrogate spike recoveries were either below acceptance limits, diluted out, or not reported because of matrix interferences.
  - b. The following shipping and chain-of-custody errors were noted for the sample shipments received by MRD Laboratory:
    - 1) The samples included in the first shipment were not sealed in individual plastic bags.
    - 2) No time sampled was included on the bottle labels.
    - 3) One sample was listed as 30D-032294 on the custody papers and 30B-032294 on the bottle labels. 30B-032294 was used for sample tracking.

4. QUALITY ASSURANCE SUPPORT ACTION: A cost estimate was furnished to the Omaha District Project Manager by MRD Laboratory. Sample receipt was completed by the MRD Laboratory Project Manager in conjunction with the Omaha District. Copies of cooler receipt forms and custody papers were furnished to the Omaha District personnel on a daily basis.
5. SUMMARY: The data package submitted for this project met the USACE minimum chemistry data reporting requirements.

Many TPH surrogate spike recoveries were either below acceptance limits, diluted out, or not reported because of matrix interferences. The majority of the MS/MSD recoveries for the TPH data were very high. The spike amounts were not provided to the reviewer; and the concentrations are critical for evaluation of the MS/MSD data. Based on the observed recoveries there are possible analytical problems or the samples are inhomogeneous.

No data discrepancies were noted. The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

Submitted by:

*Douglas B. Taggart*

DOUGLAS B. TAGGART  
Director, MRD Laboratory

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

## COMPARISON OF QA &amp; CONTRACTOR RESULTS

Project: Fort Story Larc Area, Virginia Beach, VA  
QA Sample ID.: 082D-032294  
Material Description: Soil

Contractor's Sample ID.: 82D-032294  
Date Sampled: 22 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	360	-	mg/kg	Modified 8015	<10 X	140	mg/kg

Table 002

QA Sample ID.: 308-032294  
Material Description: Soil

Contractor's Sample ID.: 308-032294  
Date Sampled: 22 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	130	-	mg/kg	Modified 8015	<10 X	85	mg/kg

Table 003

QA Sample ID.: 2908-032394  
Material Description: Soil

Contractor's Sample ID.: 2908-032394  
Date Sampled: 23 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	240	450	mg/kg	Modified 8015	<10 X	210	mg/kg

Table 004

QA Sample ID.: 2858-032394  
Material Description: Soil

Contractor's Sample ID.: 2858-032394  
Date Sampled: 23 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	100	120	mg/kg	Modified 8015	<10 X	140	mg/kg

## COMMENTS:

--: Not analyzed or not reported.

X: The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

COMPARISON OF QA & CONTRACTOR RESULTS

Project: Fort Story Larc Area, Virginia Beach, VA  
QA Sample ID.: 322D-032394 Contractor's Sample ID.: 322D-032394  
Material Description: Soil Date Sampled: 23 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	6600	4800	mg/kg	Modified 8015	<10 X	1300	mg/kg

Table 006

QA Sample ID.: 455D-032494 Contractor's Sample ID.: 455D-032494  
Material Description: Soil Date Sampled: 24 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	1200	-	mg/kg	Modified 8015	<10 X	430	mg/kg

Table 007

QA Sample ID.: 430C-032494 Contractor's Sample ID.: 430C-032494  
Material Description: Soil Date Sampled: 24 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	1800	-	mg/kg	Modified 8015	<10 X	120	mg/kg

Table 008

QA Sample ID.: 477E-032494 Contractor's Sample ID.: 477E-032494  
Material Description: Soil Date Sampled: 24 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	440	-	mg/kg	Modified 8015	<10 X	620	mg/kg

## COMMENTS:

- : Not analyzed or not reported.
- X: The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

COMPARISON OF QA & CONTRACTOR RESULTS

Project: Fort Story Larc Area, Virginia Beach, VA				Contractor's Sample ID.: 537B-32894			
QA Sample ID.: 537B32894				Date Sampled: 28 Mar 94			
Material Description: Soil							
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	47	-	mg/kg	Modified 8015	<10 X	52	mg/kg

Table 010

QA Sample ID.: 588032894				Contractor's Sample ID.: 5880-32894			
Material Description: Soil				Date Sampled: 28 Mar 94			
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	520	-	mg/kg	Modified 8015	<10 X	120	mg/kg

Table 011

QA Sample ID.: 569032894				Contractor's Sample ID.: 5690-32894			
Material Description: Soil				Date Sampled: 28 Mar 94			
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	350	-	mg/kg	Modified 8015	<10 X	190	mg/kg

Table 012

QA Sample ID.: 532B32894				Contractor's Sample ID.: 532B-32894			
Material Description: Soil				Date Sampled: 28 Mar 94			
Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	270	-	mg/kg	Modified 8015	<10 X	180	mg/kg

## COMMENTS:

--: Not analyzed or not reported.

X: The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

DEPARTMENT OF THE ARMY  
MISSOURI RIVER DIVISION, CORPS OF ENGINEERS  
DIVISION LABORATORY  
OMAHA, NEBRASKA 68102

27 JUL 1994

Subject: Chemical Quality Assurance Report

Project: Fort Story Larc Area, Virginia Beach, VA

Intended Use: IRP-Army RA

Source of Material: \_\_\_\_\_

Submitted by: Jeff Hubbard, CEMRO-ED-ER

Date Sampled: 22-28 Mar 94, Date Received: 23-29 Mar 94

Method of Test or Specification: See attached tables 001 - 012.

References: Omaha District Request No. ENE 9577 dated 23 Nov 92

-- REMARKS --

1. CONTRACTOR DATA EVALUATION: The contract laboratory (IT Analytical Services of Austin, TX) performed the analysis using EPA methods. Proper quality control procedures were followed and documented. The data for all parameters met the USACE HTW minimum chemistry reporting requirements as specified in ER 1110-1-263 (dated 1 Oct 90).

The Contractor provided chemical analytical results for 132 soil sample which were analyzed in the following manner:

- 132 soil samples for total petroleum hydrocarbons (TPH) by a modified EPA method 8015.
  - 33 soil samples for total recoverable petroleum hydrocarbons (TRPH) by EPA method 418.1.
- a. ACCURACY: Factors indicating the accuracy of the Contractor's data include:
    - 1) Surrogate spike (either o-terphenyl or benzo(a)pyrene with an acceptance range of 60-150%) recoveries which for TPH gasoline were within acceptable limits and for diesel were not reported for 23 samples and one method blank because of matrix interferences, were diluted out for 6 samples, and were low for 19 samples, 1 method blank and 2 blank spikes.

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Percifield/glm/444-4313

- 2) Matrix spike/matrix spike duplicate (MS/MSD) recoveries which for:
    - a) TPH gasoline were within acceptable limits and for TPH diesel were within acceptable limits for two of nine batches. The recoveries for the other seven diesel batches ranged from 240% to 12000%.
    - b) TRPH were within acceptable limits.
  - 3) Blank spike (BS) recoveries which for:
    - a) TPH were within acceptable limits.
    - b) TRPH were not reported.
- b. PRECISION: Factors indicating the precision of the Contractor's data include:
- 1) Relative percent differences (RPD) for MS/MSD which for:
    - a) TPH were within acceptable limits.
    - b) TRPH were within acceptable limits.
  - 2) RPD for BS were not reported.
  - 3) Laboratory duplicates were not reported.
- c. LABORATORY CONTAMINANTS: Method blank results for:
- 1) TPH: Five method blanks contained any were from 7.2 mg/kg to 22 mg/kg TPH.
  - 2) TRPH: No contaminants were reported.
- d. HOLDING TIMES: Holding times were for all samples except one TPH analysis in which the sample extract arrived at IT Austin dry.
2. QA/QC COMPARISON: Split and/or duplicate samples were submitted to MRD Laboratory for analysis. Comparison of the quality assurance (QA) and contractor test results are presented in tables 001-012. No data discrepancies were noted. The QA Laboratory detected a lubricating-type oil in the majority of the samples analyzed, but the TPH was quantified to C<sub>25</sub> and a lubricating-type oil is greater than C<sub>25</sub>.
3. OBSERVATIONS:
- a. Many TPH surrogate spike recoveries were either below acceptance limits, diluted out, or not reported because of matrix interferences.
  - b. The following shipping and chain-of-custody errors were noted for the sample shipments received by MRD Laboratory:
    - 1) The samples included in the first shipment were not sealed in individual plastic bags.
    - 2) No time sampled was included on the bottle labels.
    - 3) One sample was listed as 30D-032294 on the custody papers and 30B-032294 on the bottle labels. 30B-032294 was used for sample tracking.



4. QUALITY ASSURANCE SUPPORT ACTION: A cost estimate was furnished to the Omaha District Project Manager by MRD Laboratory. Sample receipt was completed by the MRD Laboratory Project Manager in conjunction with the Omaha District. Copies of cooler receipt forms and custody papers were furnished to the Omaha District personnel on a daily basis.
5. SUMMARY: The data package submitted for this project met the USACE minimum chemistry data reporting requirements.

Many TPH surrogate spike recoveries were either below acceptance limits, diluted out, or not reported because of matrix interferences. The majority of the MS/MSD recoveries for the TPH data were very high. The spike amounts were not provided to the reviewer; and the concentrations are critical for evaluation of the MS/MSD data. Based on the observed recoveries there are possible analytical problems or the samples are inhomogeneous.

No data discrepancies were noted. The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

Submitted by:

*Douglas B. Taggart*

DOUGLAS B. TAGGART  
Director, MRD Laboratory

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

## COMPARISON OF QA &amp; CONTRACTOR RESULTS

Project: Fort Story Larc Area, Virginia Beach, VA  
QA Sample ID.: 082D-032294  
Material Description: Soil

Contractor's Sample ID.: 82D-032294  
Date Sampled: 22 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	360	-	mg/kg	Modified 8015	<10 X	140	mg/kg

Table 002

QA Sample ID.: 30B-032294  
Material Description: Soil

Contractor's Sample ID.: 30B-032294  
Date Sampled: 22 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	130	-	mg/kg	Modified 8015	<10 X	85	mg/kg

Table 003

QA Sample ID.: 290B-032394  
Material Description: Soil

Contractor's Sample ID.: 290B-032394  
Date Sampled: 23 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	240	450	mg/kg	Modified 8015	<10 X	210	mg/kg

Table 004

QA Sample ID.: 285B-032394  
Material Description: Soil

Contractor's Sample ID.: 285B-032394  
Date Sampled: 23 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	100	120	mg/kg	Modified 8015	<10 X	140	mg/kg

## COMMENTS:

- : Not analyzed or not reported.
- X: The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

## COMPARISON OF QA &amp; CONTRACTOR RESULTS

Project: Fort Story Larc Area, Virginia Beach, VA  
QA Sample ID.: 322D-032394  
Material Description: Soil

Contractor's Sample ID.: 322D-032394  
Date Sampled: 23 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable							
Petroleum Hydrocarbons	6600	4800	mg/kg	Modified 8015	<10 X	1300	mg/kg

Table 006

QA Sample ID.: 455D-032494  
Material Description: Soil

Contractor's Sample ID.: 455D-032494  
Date Sampled: 24 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable							
Petroleum Hydrocarbons	1200	-	mg/kg	Modified 8015	<10 X	430	mg/kg

Table 007

QA Sample ID.: 430C-032494  
Material Description: Soil

Contractor's Sample ID.: 430C-032494  
Date Sampled: 24 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable							
Petroleum Hydrocarbons	1800	-	mg/kg	Modified 8015	<10 X	120	mg/kg

Table 008

QA Sample ID.: 477E-032494  
Material Description: Soil

Contractor's Sample ID.: 477E-032494  
Date Sampled: 24 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable							
Petroleum Hydrocarbons	440	-	mg/kg	Modified 8015	<10 X	620	mg/kg

## COMMENTS:

-: Not analyzed or not reported.

X: The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

COMPARISON OF QA & CONTRACTOR RESULTS

Project: Fort Story Larc Area, Virginia Beach, VA  
QA Sample ID.: 537832894  
Material Description: Soil

Contractor's Sample ID.: 5378-32894  
Date Sampled: 28 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	47	-	mg/kg	Modified 8015	<10 X	52	mg/kg

Table 010

QA Sample ID.: 588032894  
Material Description: Soil

Contractor's Sample ID.: 5880-32894  
Date Sampled: 28 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	520	-	mg/kg	Modified 8015	<10 X	120	mg/kg

Table 011

QA Sample ID.: 569032894  
Material Description: Soil

Contractor's Sample ID.: 5690-32894  
Date Sampled: 28 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	350	-	mg/kg	Modified 8015	<10 X	190	mg/kg

Table 012

QA Sample ID.: 532832894  
Material Description: Soil

Contractor's Sample ID.: 5328-32894  
Date Sampled: 28 Mar 94

Analysis	QA Lab Result	Contractor Result	Units	Analysis	QA Lab Result	Contractor Result	Units
MISCELLANEOUS							
Total Recoverable Petroleum Hydrocarbons	270	-	mg/kg	Modified 8015	<10 X	180	mg/kg

## COMMENTS:

--: Not analyzed or not reported.

X: The QA samples contained what appears to be a lubricating-type oil but no detectable gasoline or diesel hydrocarbons.

DEPARTMENT OF THE ARMY  
MISSOURI RIVER DIVISION, CORPS OF ENGINEERS  
DIVISION LABORATORY  
OMAHA, NEBRASKA 68102

27 JUL 1994

Subject: Quality Assurance Test Results

Project: Fort Story Larc Area, Virginia Beach, VA

Intended Use: IRP-Army RA

Source of Material: \_\_\_\_\_

Submitted by: Jeff Hubbard, CEMRO-ED-ER

Date Sampled: 22-28 Mar 94, Date Received: 23-29 Mar 94

Method of Test or Specification: See attached test result sheets.

References: Omaha District Request No. ENE 9577 dated 23 Nov 92

-- REMARKS --

1. The samples arrived in good condition, however, there were some sample labelling and chain-of-custody errors.
2. Enclosed are the following:  
  
Part A: Sample Receipt Information (1 page)  
Part B: Chain-of-Custody Information (14 pages)  
Part C: Quality Assurance Test Results (35 pages)
3. The Chemical Quality Assurance Report will be forwarded to you under separate cover on or about 26 Jul 94.

Submitted by:

*Douglas B. Taggart*

DOUGLAS B. TAGGART  
Director, MRD Laboratory

*LP 7-26-94*  
Percifield/glm/444-4313

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PART A

SAMPLE RECEIPT INFORMATION

QA/QC Table #	Customer Sample #	Date Sampled	Matrix	MRD Lab # Assigned	Tests Assigned	QA Test Results Page Number
001	082D-032294	22 Mar 94	Soil	940324-001 940324-002	Modified 8015 TRPH	C1 C16
002	308-032294	22 Mar 94	Soil	940324-003 940324-004	Modified 8015 TRPH	C2 C17
003	290B-032394	23 Mar 94	Soil	940324-058 940324-059	Modified 8015 TRPH	C3 C18
004	285B-032394	23 Mar 94	Soil	940324-060 940324-061	Modified 8015 TRPH	C4 C19
005	322D-032394	23 Mar 94	Soil	940324-062 940324-063	Modified 8015 TRPH	C5 C24
006	455D-032494	24 Mar 94	Soil	940325-002 940325-003	Modified 8015 TRPH	C6 C25
007	430C-032494	24 Mar 94	Soil	940325-004 940325-005	Modified 8015 TRPH	C7 C26
008	477E-032494	24 Mar 94	Soil	940325-006 940325-007	Modified 8015 TRPH	C8 C27
009	537B32894	24 Mar 94	Soil	940329-010 940329-011	Modified 8015 TRPH	C10 C29
010	588D32894	28 Mar 94	Soil	940329-008 940329-009	Modified 8015 TRPH	C9 C28
011	569D32894	28 Mar 94	Soil	940329-012 940329-013	Modified 8015 TRPH	C11 C30
012	532B32894	28 Mar 94	Soil	940329-014 940329-015	Modified 8015 TRPH	C12 C31

PART B

CHAIN-OF-CUSTODY INFORMATION

Page No.	Chain-of-Custody No.	Date Signed
B1	417552	22 Mar 94
B4	413605	23 Mar 94
B7	413609	23 Mar 94
B10	413612	24 Mar 94
B13	375793	28 Mar 94

**ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD \***

Reference Document No. 41755  
Page 1 of 1

Project Name/No. Fort Story 519029  
Sample Team Members Demarco/Bernardo  
Profit Center No. 3511  
Project Manager Tom Mathison  
Purchase Order No. 519029  
Required Report Date 11

Samples Shipment Date 7 3-22-94  
Lab Destination 8 MRD Lab  
Lab Contact 9  
Project Contact/Phone Tom Mathison (412) 372-7701  
Carrier/Waybill No. 13 9626951972

Bill to: 5 Tom Mathison IT Corp  
2790 Mossdale Blvd  
Monroeville Pa 15146  
Report to: 10 Tom Mathison  
IT Corp  
2790 Mossdale Blvd.  
Monroeville PA 15146

**ONE CONTAINER PER LINE**

Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time <sup>16</sup> Collected	Container <sup>17</sup> Type	Sample <sup>18</sup> Volume	Pre- <sup>19</sup> servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
082D-032294	soil	3-22-94 9:00	amber glass	(3) 60 ml	ice 4°	8015		
082D-032294	soil	3-22-94 9:00	amber glass	250 ml	ice 4°	418.1		
30D-032294	soil	3-22-94 10:55	amber glass	(3) 60 ml	ice 4°	8015		
30D-032294	soil	3-22-94 10:55	amber glass	250 ml	ice 4°	418.1		

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>  
Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐  
Sample Disposal: <sup>25</sup>  
Return to Client ☐ Disposal by Lab ☒ Archive (mos.)

Turnaround Time Required: <sup>26</sup>  
Normal ☒ Rush ☐  
QC Level: <sup>27</sup>  
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by <sup>28</sup> (Signature/Affiliation) <u>Demarco</u>	Date: <u>3/22/94</u> Time: <u>4:30</u>	1. Received by <sup>28</sup> (Signature/Affiliation)	Date: Time:
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by <u>Carol Deluna</u> (Signature/Affiliation)	Date: <u>23 Mar 94</u> Time: <u>0850</u>

Comments: <sup>29</sup>



COOLER RECEIPT FORM

LIMS# 2482 MRD Cooler # N/A Number of Coolers 1 Contractor Cooler I.T.

PROJECT: Fort Story LARC Date received: 23 Mar 94

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS.

A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 23 Mar 94 C-of-C Number: 417552

by (print) Conrad L. German (sign) Conrad L. German

1. Did cooler come with a shipping slip (air bill, etc.)? ☒ YES ☐ NO

If YES, enter carrier name & air bill number here: FEDX: 9626951972

2. Were custody seals on outside of cooler? ☒ YES ☐ NO

How many & where: 2-one each side of Lid <sup>CUSTODY Tape</sup> seal date: None seal name: None

3. Were custody seals unbroken and intact at the date and time of arrival? ☒ YES ☐ NO

4. Did you screen samples for radioactivity using the Geiger Counter? ☒ YES ☐ NO

5. Were custody papers sealed in a plastic bag & taped inside to the lid? ☒ YES ☐ NO

6. Were custody papers filled out properly (ink, signed, etc.)? ☒ YES ☐ NO

7. Did you sign custody papers in the appropriate place? ☒ YES ☐ NO

8. Was project identifiable from custody papers? If YES, enter project name at the top of this form. ☒ YES ☐ NO

9. If required, was enough ice used? Type of ice: Regular 10°C ☒ YES ☐ NO

10. Have designated person initial here to acknowledge receipt of cooler: XP (date) 3/24/94

B. LOG-IN PHASE: Date samples were logged-in: 24 Mar 94

by (print) Conrad L. German (sign) Conrad L. German

11. Describe type of packing in cooler: Vermiculite

12. Were all bottles sealed in separate plastic bags? ☐ YES ☒ NO

13. Did all bottles arrive unbroken & were labels in good condition? ☒ YES ☐ NO

14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? ☐ YES ☒ NO

15. Did all bottle labels agree with custody papers? ☐ YES ☒ NO

16. Were correct containers used for the tests indicated? ☒ YES ☐ NO

17. Were correct preservatives added to samples? N/A ☒ YES ☐ NO

18. Was a sufficient amount of sample sent for tests indicated? ☒ YES ☐ NO

19. Were bubbles absent in Volatile samples? If NO, list by QA#: N/A ☒ YES ☐ NO

20. Was the project manager called and status discussed? If YES, give details on the back of this form. YES ☐ NO ☐

21. Who was called? \_\_\_\_\_ By whom? \_\_\_\_\_ (date) \_\_\_\_\_

9. a) Too little ice for so much sample  
 b) Vermiculite is a good insulator - Needs more ice.

Note: Vermiculite was wet and most bottles were not sealed in a bag.

Samples Received at 10°C.

14. No Time Sampled on labels

15. For Sample ID ~~30D~~ (1/2 of containers):

C-O-C  
 30D-032294

Labels  
 30B-032294

Logged in as per label  $\nearrow$

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD \*

Reference Document No. 41360  
Page 1 of 1

Project Name/No. <sup>1</sup> Fort Story 519029  
Sample Team Members <sup>2</sup> Demarco / Bernardo  
Profit Center No. <sup>3</sup> 3511  
Project Manager <sup>4</sup> Tom Mathison  
Purchase Order No. <sup>6</sup> 519029  
Required Report Date <sup>11</sup> NTAT

MRD LIMS 2482  
Samples Shipment Date <sup>7</sup> 3-23-94  
Lab Destination <sup>8</sup> MRD  
Lab Contact <sup>9</sup>  
Project Contact/Phone <sup>12</sup> T. Mathison  
Carrier/Waybill No. <sup>13</sup> 9710126215

Bill to: <sup>5</sup> Tom Mathison  
IT Corp  
2790 Mossie Blvd  
Monroeville Pa 15146

Report to: <sup>10</sup> Tom Mathison  
IT Corp  
2790 Mossie Blvd.  
Monroeville Pa 15146

## ONE CONTAINER PER LINE

Sample <sup>14</sup> Number	Sample <sup>15</sup> Description/Type	Date/Time <sup>16</sup> Collected	Container <sup>17</sup> Type	Sample <sup>18</sup> Volume	Pre- <sup>19</sup> servative	Requested Testing <sup>20</sup> Program	Condition on <sup>21</sup> Receipt	Disposal <sup>22</sup> Record No.
290B-032394	Soil	8:30 3-23-94	amber glass	(3) 60ml	ice 40	8015		
290B-032394	Soil	8:30 3-23-94	amber glass	250ml	ice 40	418.1		
285B-032394	Soil	9:20 3-23-94	amber glass	(3) 60ml	ice 40	8015		
285B-032394	Soil	9:20 3-23-94	amber glass	250ml	ice 40	418.1		

### Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>  
Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: <sup>25</sup>  
Return to Client ☐ Disposal by Lab ☒ Archive (mos.)

Turnaround Time Required: <sup>26</sup>  
Normal ☒ Rush ☐

QC Level: <sup>27</sup>  
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by <sup>28</sup> (Signature/Affiliation) <i>Demarco</i>	Date: 3/23/94 Time: 4:50	1. Received by <sup>28</sup> (Signature/Affiliation)	Date: _____ Time: _____
2. Relinquished by (Signature/Affiliation)	Date: _____ Time: _____	2. Received by (Signature/Affiliation)	Date: _____ Time: _____
3. Relinquished by (Signature/Affiliation)	Date: _____ Time: _____	3. Received by (Signature/Affiliation) <i>Carol German</i>	Date: 24 Mar 94 Time: 0945

Comments: <sup>29</sup>

## COOLER RECEIPT FORM

B5

LIMS# 2482 MRD Cooler # N/A Number of Coolers 1 of 2 Contractor Cooler IT

PROJECT: Fort Story Love Area Date received: 24 Mar 94

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS.

A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 24 Mar 94 C-of-C Number: 413605

by (print) Conrad L. German (sign) Conrad L. German

1. Did cooler come with a shipping slip (air bill, etc.)? ..... ☒ YES ☐ NO

If YES, enter carrier name & air bill number here: FEDX: 9710126215

2. Were custody seals on outside of cooler? <sup>IT</sup> Custody Tape ..... ☒ YES ☐ NO

How many & where: 2 - one each side of lid, seal date: None, seal name None

3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES ☒ NO ☐

4. Did you screen samples for radioactivity using the Geiger Counter? ..... ☒ YES ☐ NO

5. Were custody papers sealed in a plastic bag & taped inside to the lid? ..... ☒ YES ☐ NO

6. Were custody papers filled out properly (ink, signed, etc.)? ..... ☒ YES ☐ NO

7. Did you sign custody papers in the appropriate place? ..... ☒ YES ☐ NO

8. Was project identifiable from custody papers? If YES, enter project name at the top of this form. ☒ YES ☐ NO

9. If required, was enough ice used? ..... Type of ice: Regular 11-12°C ..... YES ☒ NO ☐

10. Have designated person initial here to acknowledge receipt of cooler: LP (date) 3/24/94

B. LOG-IN PHASE: Date samples were logged-in: 24 Mar 94

by (print) Conrad L. German (sign) Conrad L. German

11. Describe type of packing in cooler: Diatomaceous Earth - Muddy

12. Were all bottles sealed in separate plastic bags? ..... ☒ YES ☐ NO

13. Did all bottles arrive unbroken & were labels in good condition? ..... ☒ YES ☐ NO

14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? ..... YES ☒ NO ☐

15. Did all bottle labels agree with custody papers? ..... ☒ YES ☐ NO

16. Were correct containers used for the tests indicated? ..... ☒ YES ☐ NO

17. Were correct preservatives added to samples? ..... N/A ☒ YES ☐ NO

18. Was a sufficient amount of sample sent for tests indicated? ..... ☒ YES ☐ NO

19. Were bubbles absent in Volatile samples? If NO, list by QAL: N/A ☒ YES ☐ NO

20. Was the project manager called and status discussed? If YES, give details on the back of this form. YES ☐ NO ☐

21. Who was called? \_\_\_\_\_ By whom? \_\_\_\_\_ (date) \_\_\_\_\_

3. One Custody Seal - completely broken ~~thru~~  
through on arrival at MRD Lab.

6. Note: Time Relinquished should have an  
indication whether 4:30 is AM or PM.

9. Note enough ice - all melted out of  
poly bag (diatomaceous earth turned to Mud)

Samples Received at 11-12°C.

14. No Time-Sampled entries on bottle  
labels.



INTERNATIONAL  
TECHNOLOGY  
CORPORATION

# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD \*

Reference Document No. 4136

Page 1 of 1

Project Name/No. WE Story 519029 MRD LIMS 2482  
 Sample Team Members Demarco / Bernarda Samples Shipment Date 3-23-94  
 Profit Center No. 3 3511 Lab Destination MRD  
 Project Manager Tom Mathison Lab Contact 9  
 Purchase Order No. 6 519029 Project Contact/Phone 4. Mathison (412) 372-7701  
 Required Report Date 11 NTAT Carrier/Waybill No. 13 9710126215

Bill to: 5 Tom Mathison  
ITT Corp  
2790 Mossdale Blvd  
Monroeville Pa 15146

Report to: 10 Tom Mathison  
ITT Corp  
2790 Mossdale Blvd  
Monroeville Pa 15146

## ONE CONTAINER PER LINE

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Sample 18 Volume	Pre- 19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
322D-032394	Soil	10:30 3-23-94	Amber glass	(3) 100ml	Ke 40	8015		
332D-032394	Soil	10:30 3-23-94	Amber glass	250ml	ice 40	418.1		

Special Instructions: 23

Possible Hazard Identification: 24

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: 25

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos

Turnaround Time Required: 26

Normal ☒ Rush ☐

QC Level: 27

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by 28  
(Signature/Affiliation)

Date: 3/23/94  
Time: 4:30

1. Received by 28  
(Signature/Affiliation)

Date:  
Time:

2. Relinquished by  
(Signature/Affiliation)

Date:  
Time:

2. Received by  
(Signature/Affiliation)

Date:  
Time:

3. Relinquished by  
(Signature/Affiliation)

Date:  
Time:

3. Received by  
(Signature/Affiliation)

Date: 24 Mar 94  
Time: 0945

Comments: 29

COOLER RECEIPT FORM

LIMS# 2482 HAD Cooler # N/A Number of Coolers 2 of 2 Contractor Cooler IT

PROJECT: Fort Story Lave Area Date received: 24 Mar 94

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS.

A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 24 Mar 94 C-of-C Number: 413609

by (print) Conrad L. German (sign) Conrad L. German

1. Did cooler come with a shipping slip (air bill, etc.)? ☒ YES ☐ NO

If YES, enter carrier name & air bill number here: FE DX: 6801112202

2. Were custody seals on outside of cooler? IT Custody Tape ☒ YES ☐ NO

How many & where: 2 - one each side of Lid, seal date: None, seal name None

3. Were custody seals unbroken and intact at the date and time of arrival? ☐ YES ☒ NO

4. Did you screen samples for radioactivity using the Geiger Counter? ☒ YES ☐ NO

5. Were custody papers sealed in a plastic bag & taped inside to the lid? ☒ YES ☐ NO

6. Were custody papers filled out properly (ink, signed, etc.)? ☒ YES ☐ NO

7. Did you sign custody papers in the appropriate place? ☒ YES ☐ NO

8. Was project identifiable from custody papers? If YES, enter project name at the top of this form. ☒ YES ☐ NO

9. If required, was enough ice used? ☒ YES ☐ NO Type of ice: Regular 6°C

10. Have designated person initial here to acknowledge receipt of cooler: LP (date) 3/24/94

B. LOG-IN PHASE: Date samples were logged-in: 24 Mar 94

by (print) Conrad L. German (sign) Conrad L. German

11. Describe type of packing in cooler: Diatomaceous Earth - ALL Wet - Mild

12. Were all bottles sealed in separate plastic bags? ☒ YES ☐ NO

13. Did all bottles arrive unbroken & were labels in good condition? ☒ YES ☐ NO

14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? ☒ YES ☐ NO

15. Did all bottle labels agree with custody papers? ☒ YES ☐ NO

16. Were correct containers used for the tests indicated? ☒ YES ☐ NO

17. Were correct preservatives added to samples? N/A ☒ YES ☐ NO

18. Was a sufficient amount of sample sent for tests indicated? ☒ YES ☐ NO

19. Were bubbles absent in Volatile samples? If NO, list by QA#: N/A ☒ YES ☐ NO

20. Was the project manager called and status discussed? If YES, give details on the back of this form. ☒ YES ☐ NO

21. Who was called? \_\_\_\_\_ By whom? \_\_\_\_\_ (date) \_\_\_\_\_

3. One custody Tape appeared to be old and was completely cut through - on arrival at MRD lab.

9. a) Not enough ice

b) Ice was not double bagged

c) Packing (Diatomaceous Earth) was turned to Mud.

d) Received at  $6^{\circ}\text{C}$ .

6. Changed character is Not initialed.

14. No Time-Sampled entries on bottle Labels.



ANALYSIS REQUEST AND  
CHAIN OF CUSTODY RECORD \*Reference Document No. 4136  
Page 1 of 31

Project Name/No. Ford Story 519029 Samples Shipment Date 7 3-24-94

Sample Team Members 2 DeMarco / Bernardo

Lab Destination 8 MRD

Bill to: 5 Tom Mathison

IT Corp  
2790 Monrovia Blvd  
Monrovia Pa 15146

Profit Center No. 3 3511

Lab Contact 9

Project Manager 4 Tom Mathison

Project Contact/Phone 12 Mathison (412) 510 1701

Report to: 10 Tom Mathison

Purchase Order No. 6 519029

Carrier/Waybill No. 13 1451223675

IT Corp  
2790 Monrovia Blvd  
Monrovia Pa 15146

Required Report Date 11 normal IAT

## ONE CONTAINER PER LINE

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Sample 18 Volume	Pre- 19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
475D-032494	Soil	9:21 3-24-94	amber glass	(3) 100ml	1cc 40	80015		
455D-032494	Soil	9:21 3-24-94	amber glass	200ml	1cc 40	418.1		
430C-032494	Soil	9:35 3-24-94	amber glass	(3) 100ml	1cc 40	11824 PC15		
432C-032494	Soil	9:55 3-24-94	amber glass	200ml	1cc 40	418.1		
477E-032494	Soil	10:50 3-24-94	amber glass	(3) 40ml	1cc 40	80015		
477E-032494	Soil	10:50 3-24-94	amber glass	200ml	1cc 40	418.1		

Special Instructions: 23

Possible Hazard Identification: 24

Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: 25

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos)

Turnaround Time Required: 26

Normal ☒ Rush ☐ 10 days

QC Level: 27

I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by 28

(Signature/Affiliation)

*Joanne DeMarco*

Date: 2/24/94

Time: 4:30

1. Received by 28

(Signature/Affiliation)

Date:

Time:

2. Relinquished by

(Signature/Affiliation)

Date:

Time:

2. Received by

(Signature/Affiliation)

Date:

Time:

3. Relinquished by

(Signature/Affiliation)

Date:

Time:

3. Received by

(Signature/Affiliation)

Date:

Time:

Comments: 29

COOLER RECEIPT FORM

LIMS# 2482 MRD Cooler # N/A Number of Coolers 1 Contractor Cooler IT

PROJECT: Foot Story Larc Area Date received: 25 Mar. 94

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS.

A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 25 Mar. 94 C-of-C Number: 413612

by (print) Conrad L. German (sign) Conrad L. German

1. Did cooler come with a shipping slip (air bill, etc.)? ☒ YES ☐ NO

If YES, enter carrier name & air bill number here: FEDX: 1451223675

2. Were custody seals on outside of cooler? IT Custody Tape ☒ YES ☐ NO

How many & where: 2- one each side of lid seal date: None seal name None

3. Were custody seals unbroken and intact at the date and time of arrival? ☒ YES ☐ NO

4. Did you screen samples for radioactivity using the Geiger Counter? ☒ YES ☐ NO

5. Were custody papers sealed in a plastic bag & taped inside to the lid? ☒ YES ☐ NO

6. Were custody papers filled out properly (ink, signed, etc.)? ☐ YES ☒ NO

7. Did you sign custody papers in the appropriate place? ☒ YES ☐ NO

8. Was project identifiable from custody papers? If YES, enter project name at the top of this form. ☒ YES ☐ NO

9. If required, was enough ice used? Type of ice: Regular - all Melted 5-10°C ☒ YES ☐ NO

10. Have designated person initial here to acknowledge receipt of cooler: LP (date) 3/25/94

B. LOG-IN PHASE: Date samples were logged-in: 25 Mar 94

by (print) Conrad L. German (sign) Conrad L. German

11. Describe type of packing in cooler: White crushed rock Dumasacres Earth

12. Were all bottles sealed in separate plastic bags? ☒ YES ☐ NO

13. Did all bottles arrive unbroken & were labels in good condition? ☒ YES ☐ NO

14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? ☐ YES ☒ NO

15. Did all bottle labels agree with custody papers? ☒ YES ☐ NO

16. Were correct containers used for the tests indicated? ☒ YES ☐ NO

17. Were correct preservatives added to samples? N/A ☒ YES ☐ NO

18. Was a sufficient amount of sample sent for tests indicated? ☒ YES ☐ NO

19. Were bubbles absent in Volatile samples? If NO, list by QA#: N/A ☒ YES ☐ NO

20. Was the project manager called and status discussed? If YES, give details on the back of this form. ☐ YES ☒ NO

21. Who was called? \_\_\_\_\_ By whom? \_\_\_\_\_ (date) \_\_\_\_\_

9. Samples on Top - Warm      Not enough ice on top  
of Samples      Samples below - insulated  
away from ice

6. Changed item is Not initialed.

14. No Time Sampled entered on bottle  
Labels.

DIS



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document 37579  
Page 1 of 1

Project Name/No. 1 1st Story - 519029 Samples Shipment Date 7 MRD Lims 2402  
Sample Team Members 2 DeMarco/Bernardo Lab Destination 8 MRD  
Profit Center No. 3 3511 Lab Contact 9  
Project Manager 4 Tom Mathison Project Contact/Phone 14 Mathison (12) 372-7701  
Purchase Order No. 6 519029 Carrier/Waybill No. 13 96 26951845 Report to: 10 Tom Mathison  
Required Report Date 11 Normal TAT IT Corp  
2790 Mossido Blvd  
Monroeville Pa 15146

ONE CONTAINER PER LINE

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Sample 18 Volume	Pre- 19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
588 D 32894	Soil	4:40 3/28/94	amber glass	(3) 60ml	ice 40	8015		
555 D 32894		8:40 3/28/94		250ml		418.1		
522 B 32894		10:40 3/28/94		(3) 60ml		8015		
537 D 32894		10:40 3/28/94		250ml		418.1		
569 D 32894		11:30 3/28/94		(3) 60ml		8015		
564 D 32894		11:30 3/28/94		250ml		418.1		
532 B - 32894		12:20 3/28/94		(3) 60ml		8015		
	Soil	12:20 3/28/94	amber glass	250ml	ice 40	418.1		

Special Instructions: 23

Possible Hazard Identification: 24  
Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: 25  
Return to Client ☐ Disposal by Lab ☒ Archive (mos.)

Turnaround Time Required: 26  
Normal ☒ Rush: ☐

QC Level: 27  
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by 28 (Signature/Affiliation) <u>Dominic Bern...</u>	Date: <u>3/28/94</u> Time: <u>4:50</u>	1. Received by 28 (Signature/Affiliation)	Date: Time:
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by <u>Shelly Swink</u> (Signature/Affiliation)	Date: <u>3/29/94</u> Time: <u>0830</u>

Comments: 29

COOLER RECEIPT FORM

LIMS# 2482 WRD Cooler #        Number of Coolers 1 Contractor Cooler IT

PROJECT: H. Story Date received: 3/29/94

USE OTHER SIDE OF THIS FORM TO NOTE DETAILS CONCERNING CHECK-IN PROBLEMS.

A. PRELIMINARY EXAMINATION PHASE: Date cooler opened: 3/29/94 C-of-C Number: 375793

by (print) Sherry Swink (sign) Sherry Swink

1. Did cooler come with a shipping slip (air bill, etc.)? ☒ YES ☐ NO

If YES, enter carrier name & air bill number here: FEDX: 9626951865

2. Were custody ~~seals~~ tape on outside of cooler? ☒ YES ☐ NO

How many & where: each side, seal date: none, seal name:                     

3. Were custody seals unbroken and intact at the date and time of arrival? ☒ YES ☐ NO

4. Did you screen samples for radioactivity using the Geiger Counter? ☒ YES ☐ NO

5. Were custody papers sealed in a plastic bag & taped inside to the lid? ☒ YES ☐ NO

6. Were custody papers filled out properly (ink, signed, etc.)? ☒ YES ☐ NO

7. Did you sign custody papers in the appropriate place? ☒ YES ☐ NO

8. Was project identifiable from custody papers? If YES, enter project name at the top of this form. ☒ YES ☐ NO

9. If required, was enough ice used? Type of ice: regular 4-9.5 ☒ YES ☐ NO

10. Have designated person initial here to acknowledge receipt of cooler: SP (date) 3/29/94

B. LOG-IN PHASE: Date samples were logged-in: 3/29/94

by (print) Sherry Swink (sign) Sherry Swink

11. Describe type of packing in cooler: crushed rock

12. Were all bottles sealed in separate plastic bags? ☒ YES ☐ NO

13. Did all bottles arrive unbroken & were labels in good condition? ☒ YES ☐ NO

14. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)? ☒ YES ☐ NO

15. Did all bottle labels agree with custody papers? ☒ YES ☐ NO

16. Were correct containers used for the tests indicated? ☒ YES ☐ NO

17. Were correct preservatives added to samples? N/A ☒ YES ☐ NO

18. Was a sufficient amount of sample sent for tests indicated? ☒ YES ☐ NO

19. Were bubbles absent in Volatile samples? If NO, list by QA#: N/A ☒ YES ☐ NO

20. Was the project manager called and status discussed? If YES, give details on the back of this form. ☒ YES ☐ NO

21. Who was called?

**PART C**

**QUALITY ASSURANCE TEST RESULTS**

C1

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 22 Mar 94      Customer Sample No: 082D-032294  
Date Sample Received: 23 Mar 94      MRD Lab Sample No: 940324-H001  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Result (mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 100%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 500 mg/kg of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Splichal      Date: 15 April 94

C2

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 22 Mar 94      Customer Sample No: 30B-032294  
Date Sample Received: 23 Mar 94      MRD Lab Sample No: 940324-H003  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Result (mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 104%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 200 mg/kg of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Splitchal      Date: 15 April 94



C3

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 23 Mar 94      Customer Sample No: 290B-032394  
Date Sample Received: 24 Mar 94      MRD Lab Sample No: 940324-H058  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Result (mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 99%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 200 mg/kg of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Splichal      Date: 15 April 94

C4

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 23 Mar 94      Customer Sample No: 285B-032394  
Date Sample Received: 24 Mar 94      MRD Lab Sample No: 940324-H060  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Result (mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 108%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 200 mg/kg of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Splichal      Date: 15 April 94

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 23 Mar 94      Customer Sample No: 322D-032394  
Date Sample Received: 24 Mar 94      MRD Lab Sample No: 940324-H062  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Result (mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: Matrix Interference

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 2500 mg/kg of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Splichal      Date: 15 April 94

C6

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 24 Mar 94      Customer Sample No: 455D-032494  
Date Sample Received: 25 Mar 94      MRD Lab Sample No: 940325-H002  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Result (mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 121%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 2000 mg/kg of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Splichal      Date: 15 April 94

C7

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 24 Mar 94      Customer Sample No: 430C-032494  
Date Sample Received: 25 Mar 94      MRD Lab Sample No: 940325-H004  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Result (mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 102%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 500 mg/kg of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Splitchal      Date: 15 April 94

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 24 Mar 94      Customer Sample No: 477E-032494  
Date Sample Received: 25 Mar 94      MRD Lab Sample No: 940325-H006  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Result (mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 127%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 1500 mg/kg of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Splinkel      Date: 15 April 94

C9

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 28 Mar 94      Customer Sample No: 588D032894  
Date Sample Received: 29 Mar 94      MRD Lab Sample No: 940329-H008  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Result (mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 108%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 400 mg/kg of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Splichal      Date: 15 April 94

C10

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 28 Mar 94      Customer Sample No: 537B032894  
Date Sample Received: 29 Mar 94      MRD Lab Sample No: 940329-H010  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Result (mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 113%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, but appears to contain about 200 mg/kg of a lubricating-type oil.

u: Below Detection Limit

Approved By: David E. Spitzel      Date: 15 April 94



C11

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 28 Mar 94      Customer Sample No: 569D032894  
Date Sample Received: 29 Mar 94      MRD Lab Sample No: 940329-H012  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Result (mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 105%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, and no detectable lubricating-type oils (less than 100 mg/kg).

u: Below Detection Limit

Approved By: David E. Splichal      Date: 15 April 94

C12

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

Date Sample Taken: 28 Mar 94      Customer Sample No: 532B032894  
Date Sample Received: 29 Mar 94      MRD Lab Sample No: 940329-H014  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Result (mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24 (as diesel)	u	10

Pentacosane Surrogate Recovery: 109%

Lab Comment: The sample contains no detectable gasoline or diesel hydrocarbons, and no detectable lubricating-type oils (less than 100 mg/kg).

u: Below Detection Limit

Approved By: David E. Splival      Date: 15 April 94

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

QC Sample Identifier: Method Blank

Date Sample Taken: NA

Customer Sample No: NA

Date Sample Received: NA

MRD Lab Sample No: 940408MB

Date Extracted: 08 Apr 94

Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Sodium Sulfate

Sample Container Used: 20 mL vial

Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Sample Result(mg/kg)</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24	u	10
Pentacosane Surrogate Recovery:		98%

u: Below Detection Limit

Approved By: David E. Splichal Date: 15 April 94

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482  
Project: Fort Story Larc Area; Virginia Beach, VA  
QC Sample Identifier: Laboratory Duplicate  
Date Sample Taken: 22 Mar 94      Customer Sample No: 082D-032294-005  
Date Sample Received: 23 Mar 94      MRD Lab Sample No: 940324-H001  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil  
Sample Container Used: 60 mL glass jar      Analyst: M. Woster

RESULTS

<u>Analysis for</u>	<u>Sample Result 1</u>	<u>Sample Result 2</u>	<u>Detection Limits (mg/kg)</u>
TPH, C6-C24	u	u	10
Pentacosane Surrogate Recovery (%)	100	126	

Surrogate Average = 113%  
RPD = 23.0

COMMENT: There is some interference due to the presence of about 500 mg/kg of lubricating-type oil in the samples.

u: Below Detection Limit

Approved By: David E. Splitchal      Date: 15 April 94

C15

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Fuel Hydrocarbons

FAMIS No: 2482

Project: Fort Story Larc Area; Virginia Beach, VA

QC Sample Identifier: Matrix Spike/Matrix Spike Duplicate  
Date Sample Taken: 22 Mar 94 Customer Sample No: 082D-032294-005  
Date Sample Received: 23 Mar 94 MRD Lab Sample No: 940324-H001  
Date Extracted: 08 Apr 94  
Date Analyzed: 13 Apr 94

Analysis Method: EPA 8015 (Modified)

Sample Description: Soil

Sample Container Used: 60 mL glass jar

Analyst: M. Woster

RESULTS

Analysis for	Sample Result	Spiked Level	Result (mg/kg)	% Rec.	Surrogate Rec. Pentacosane
TPH, C6-C24	u	200	264	132	123
TPH, C6-C24	u	200	238	119	109

Average Recovery = 251 mg/kg (126%)  
RPD = 10.4

COMMENT: There is some interference due to the presence of  
about 500 mg/kg of lubricating-type oil in the sample.

DL: 10 mg/kg as diesel  
u: Below Detection Limit

Approved By: David E. Splital Date: 15 April 94

C16

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940324-H002

Client Sample No.: 082D-032294

Extraction Method: EPA-9071

Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

Date Sample Taken: 22 Mar 94

Date Sample Received: 23 Mar 94

Date Extracted: 31 Mar 94

Date Analyzed: 06 Apr 94

Percent Solid (%): 99.9

Extraction Solvent: Freon TF

Dilution Factor: 1.0

RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	360	25

Laboratory Comments:

GREY SAND

Extracted sample weight (g ): 20.13

Final extracted volume (mL): 100

Approved By:

cwb

Date: April 14, 1994

C17

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940324-H004

Client Sample No.: 30B-032294

Extraction Method: EPA-9071

Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

Date Sample Taken: 22 Mar 94

Date Sample Received: 23 Mar 94

Date Extracted: 31 Mar 94

Date Analyzed: 06 Apr 94

Percent Solid (%): 99.5

Extraction Solvent: Freon TF

Dilution Factor: 1.0

RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	130	25

Laboratory Comments:

GREY SAND

Extracted sample weight (g ): 20.49

Final extracted volume (mL): 100

Approved By:

*cwb*

Date:

*April 14, 1994*

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil	Date Sample Taken: 23 Mar 94
Sample Container: 1-250 mL amber glass	Date Sample Received: 24 Mar 94
MRD Lab Sample No.: 940324-H059	Date Extracted: 31 Mar 94
Client Sample No.: 290B-032394	Date Analyzed: 06 Apr 94
Extraction Method: EPA-9071	Percent Solid (%): 96.8
Analysis Method: EPA-418.1	Extraction Solvent: Freon TF
Extracted By: CHARLES W. BLACK	Dilution Factor: 1.0
Analyzed By: CHARLES W. BLACK	

RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	240	25

Laboratory Comments:

GREY BROWN

Extracted sample weight (g ): 20.17  
Final extracted volume (mL): 100

Approved By:

*cwb*

Date: April 14, 1994



C19

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Sample Container: 1-250 mL amber glass

MRD Lab Sample No.: 940324-H061

Client Sample No.: 285B-032394

Extraction Method: EPA-9071

Analysis Method: EPA-418.1

Extracted By: CHARLES W. BLACK

Analyzed By: CHARLES W. BLACK

Date Sample Taken: 23 Mar 94

Date Sample Received: 24 Mar 94

Date Extracted: 31 Mar 94

Date Analyzed: 06 Apr 94

Percent Solid (%): 97.4

Extraction Solvent: Freon TF

Dilution Factor: 1.0

RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	100	25

Laboratory Comments:

GREY SAND

Extracted sample weight (g ): 20.03

Final extracted volume (mL): 100

Approved By:

CWB

Date: April 14, 1994

C20

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

FAMIS Number: 2482  
Project Name: Fort Story Larc Area  
QC Identifier: Method Blank

Sample Description: Soil                      Extraction Method: SW-846 Method 9071  
Analysis Procedure: EPA-418.1              Analyst: Charles W. Black  
Comment: Clean Sand

---

Analysis	Blank Result	Detection Limit
TRPH	u	25
Units	mg/kg	mg/kg

---

Date Extracted: 31 Mar 94

Date Analyzed: 06 Apr 94

TRPH = Total Recoverable Petroleum Hydrocarbons  
u = Below Detection Limits

Approved By:

*curB*

Date:

*April 14, 1994*

C21

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

FAMIS Number: 2482  
Project Name: Fort Story Larc Area  
QC Identifier: Blank Spike/Blank Spike Duplicate

Sample Description: Soil                      Extraction Method: SW-846 Method 9071  
Analysis Procedure: EPA-418.1              Analyst: Charles W. Black  
Comment: Clean Sand

Anal	Blank Res	Spike Added	Conc BS <sup>+</sup>	Rec BS	Blank Res	Spike Added	Conc BSD=	Rec BSD	RPD	QC Limits RPD %Rec
	-----	-----	-----	-----	-----	-----	-----	-----	----	-----
TRPH	u	1005	946	94	u	1005	928	92	2	25 75-125

Units	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	%	%	%
-------	-------	-------	-------	---	-------	-------	-------	---	---	---

Date Extracted: 31 Mar 94              Date Analyzed: 06 Apr 94  
= Date Extracted: 31 Mar 94              Date Analyzed: 06 Apr 94

Extraction Solvent: Freon TF  
Final Extracted Volume: 100 mL

Anal = Analysis  
TRPH = Total Recoverable Petroleum Hydrocarbons  
Res = Result  
Rec = Recovery  
  
BS = Blank Spike  
BSD = Blank Spike Duplicate  
RPD = Relative Percent Difference  
RPD = [(BS - BSD) x 100] / [(BS + BSD) / 2]  
u = Below Detection Limit

Approved By: Stephen Schmitz  
wrb

Date: April 14, 1994

C22

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

FAMIS Number: 2482-  
Project Name: Fort Story Larc Area  
QC Identifier: Matrix/Matrix Duplicate

Date Sample Taken: 22 Mar 94      Customer Sample No: 082D-032294  
Date Sample Recieved: 23 Mar 94      Lab Sample No: 940324-H002  
Sample Description: Soil      Extraction Method: SW-846 Method 9071  
Sample Container Used: 1-250 amber glass      Analysis Method: EPA-418.1  
Comment: Grey Sand      Analyst: Charles W. Black

Analysis	Sample Results		RPD	Acceptable RPD	Detection Limit
	Run # 1	Run # 2			
TRPH	356	316	12	25	25
Units	mg/kg	mg/kg	%	%	mg/kg

Date Extracted: 31 Mar 94

Date Analyzed: 06 Apr 94

TRPH = Total Recoverable Petroleum Hydrocarbons  
RPD = Relative Percent Difference  
 $RPD = [ \text{Run 1} - \text{Run 2} ] \times 100 / [ (\text{Run 1} + \text{Run 2}) / 2 ]$   
u = Below Detection Limits  
NC = Not Calculable

Approved By:   
vB

Date: April 14, 1994

C23

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

FAMIS Number: 2482  
Project Name: Fort Story Larc Area  
QC Identifier: Matrix Spike/Matrix Spike Duplicate

Date Sample Taken: 22 Mar 94      Customer Sample No: 082D-032294  
Date Sample Recieved: 23 Mar 94      Lab Sample No: 940324-H002  
Sample Description: Soil      Extraction Method: SW-846 Method 9071  
Comment: Grey Sand      Analysis Method: EPA-418.1  
Sample Container Used: 1-250 ml amber glass      Analyst: Charles W. Black

Anal	Samp Res I	Spike Added	Conc MS <sup>+</sup> MS <sup>+</sup>	Rec MS	Spike Added	Conc MSD=	Rec MSD	RPD	QC Limits RPD    %Rec
TRPH	356	495	784	87	500	817	92	6	25    75-125
Units	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	%	%	%

+ Date Extracted: 31 Mar 94      Date Analyzed: 06 Apr 94  
= Date Extracted: 31 Mar 94      Date Analyzed: 06 Apr 94

Extraction Solvent: Freon TF  
Final Extracted Volume: 100 mL  
Anal = Analysis  
TRPH = Total Recoverable Petroleum Hydrocarbons

Samp = Sample  
Res = Result  
Rec = Recovery  
u = Below Detection Limits

MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
RPD = Relative Percent Difference  
RPD =  $[(MS - MSD) \times 100] / [(MS + MSD) / 2]$

Approved By: 

CWB

Date: April 14, 1994

C24

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Date Sample Taken: 23 Mar 94

Sample Container: 1-250 mL amber glass

Date Sample Received: 24 Mar 94

MRD Lab Sample No.: 940324-H063

Date Extracted: 13 Apr 94

Client Sample No.: 322D-032394

Date Analyzed: 19 Apr 94

Extraction Method: EPA-9071

Percent Solid (%): 93.8

Analysis Method: EPA-418.1

Extraction Solvent: Freon TF

Extracted By: CHARLES W. BLACK

Dilution Factor: 10

Analyzed By: CHARLES W. BLACK

RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	6600	25

Laboratory Comments:

DARK GREY SAND

Extracted sample weight (g ): 20.13

Final extracted volume (mL): 100

Approved By:

cwb

David E. Splichal

Date: 20 May 94

C25

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil	Date Sample Taken: 24 Mar 94
Sample Container: 1-250 mL amber glass	Date Sample Received: 25 Mar 94
MRD Lab Sample No.: 940325-H003	Date Extracted: 13 Apr 94
Client Sample No.: 455D-032494	Date Analyzed: 19 Apr 94
Extraction Method: EPA-9071	Percent Solid (%): 89.4
Analysis Method: EPA-418.1	Extraction Solvent: Freon TF
Extracted By: CHARLES W. BLACK	Dilution Factor: 1.0
Analyzed By: CHARLES W. BLACK	

RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	1200	25

Laboratory Comments:

BROWN AND DARK GREY SAND

Extracted sample weight (g ): 20.54

Final extracted volume (mL): 100

Approved By:

David E. Splichel

cwb

Date: 20 May 94

C26

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil	Date Sample Taken: 24 Mar 94
Sample Container: 1-250 mL amber glass	Date Sample Received: 25 Mar 94
MRD Lab Sample No.: 940325-H005	Date Extracted: 13 Apr 94
Client Sample No.: 430C-032494	Date Analyzed: 19 Apr 94
Extraction Method: EPA-9071	Percent Solid (%): 87.5
Analysis Method: EPA-418.1	Extraction Solvent: Freon TF
Extracted By: CHARLES W. BLACK	Dilution Factor: 1.0
Analyzed By: CHARLES W. BLACK	

RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	1800	25

Laboratory Comments:

GREY BROWN SAND

Extracted sample weight (g ): 20.03

Final extracted volume (mL): 100

Approved By:

cwb

David E. Splichal

Date:

20 May 94



C27

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description:	Soil	Date Sample Taken:	24 Mar 94
Sample Container:	1-250 mL amber glass	Date Sample Received:	25 Mar 94
MRD Lab Sample No.:	940325-H007	Date Extracted:	13 Apr 94
Client Sample No.:	477E-032494	Date Analyzed:	19 Apr 94
Extraction Method:	EPA-9071	Percent Solid (%):	90.5
Analysis Method:	EPA-418.1	Extraction Solvent:	Freon TF
Extracted By:	CHARLES W. BLACK	Dilution Factor:	1.0
Analyzed By:	CHARLES W. BLACK		

RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	440	25

Laboratory Comments:

DARK GREY SAND

Extracted sample weight (g ): 20.18

Final extracted volume (mL): 100

Approved By: David E. Splichal  
CURB

Date: 20 May 94

C28

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil	Date Sample Taken: 28 Mar 94
Sample Container: 1-250 mL amber glass	Date Sample Received: 29 Mar 94
MRD Lab Sample No.: 940329-H009	Date Extracted: 13 Apr 94
Client Sample No.: 588D32894	Date Analyzed: 19 Apr 94
Extraction Method: EPA-9071	Percent Solid (%): 92.2
Analysis Method: EPA-418.1	Extraction Solvent: Freon TF
Extracted By: CHARLES W. BLACK	Dilution Factor: 1.0
Analyzed By: CHARLES W. BLACK	

RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	520	25

Laboratory Comments:

GREY SAND

Extracted sample weight (g ): 20.61  
Final extracted volume (mL): 100

Approved By: David E. Splichal  
CWB

Date: 20 May 94

C29

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Recoverable Petroleum-Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Date Sample Taken: 24 Mar 94

Sample Container: 1-250 mL amber glass

Date Sample Received: 29 Mar 94

MRD Lab Sample No.: 940329-H011

Date Extracted: 13 Apr 94

Client Sample No.: 537B32894

Date Analyzed: 19 Apr 94

Extraction Method: EPA-9071

Percent Solid (%): 96.4

Analysis Method: EPA-418.1

Extraction Solvent: Freon TF

Extracted By: CHARLES W. BLACK

Dilution Factor: 1.0

Analyzed By: CHARLES W. BLACK

RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	47	25

Laboratory Comments:

BEIGE SAND

Extracted sample weight (g ): 20.46

Final extracted volume (mL): 100

Approved By:

cwb

David E. Splichal

Date:

20 May 94

C30

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description: Soil

Date Sample Taken: 28 Mar 94

Sample Container: 1-250 mL amber glass

Date Sample Received: 29 Mar 94

MRD Lab Sample No.: 940329-H013

Date Extracted: 13 Apr 94

Client Sample No.: 569D32894

Date Analyzed: 19 Apr 94

Extraction Method: EPA-9071

Percent Solid (%): 86.3

Analysis Method: EPA-418.1

Extraction Solvent: Freon TF

Extracted By: CHARLES W. BLACK

Dilution Factor: 1.0

Analyzed By: CHARLES W. BLACK

---

RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	350	25

---

Laboratory Comments:

DARK GREY SAND

Extracted sample weight (g ): 20.00

Final extracted volume (mL): 100

Approved By:

*curB*

*David E. Splichel*

Date:

*20 May 94*

C31

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

Total Recoverable Petroleum Hydrocarbons

FAMIS Number: 2482

Project Name: Fort Story Larc Area

Sample Description:	Soil	Date Sample Taken:	28 Mar 94
Sample Container:	1-250 mL amber glass	Date Sample Received:	29 Mar 94
MRD Lab Sample No.:	940329-H015	Date Extracted:	13 Apr 94
Client Sample No.:	532B32894	Date Analyzed:	19 Apr 94
Extraction Method:	EPA-9071	Percent Solid (%):	94.9
Analysis Method:	EPA-418.1	Extraction Solvent:	Freon TF
Extracted By:	CHARLES W. BLACK	Dilution Factor:	1.0
Analyzed By:	CHARLES W. BLACK		

RESULTS (mg/kg)

Analysis	Result	Detection Limit
Petroleum Hydrocarbons	270	25

Laboratory Comments:

GREY SAND

Extracted sample weight (g ): 20.06

Final extracted volume (mL): 100

Approved By:  
CWB

David E. Splitchal

Date: 20 May 94

C32

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

FAMIS Number: 2482  
Project Name: Fort Story-Larc Area  
QC Identifier: Method Blank

Sample Description: Soil                      Extraction Method: SW-846 Method 9071  
Analysis Procedure: EPA-418.1              Analyst: Charles W. Black  
Comment: Clean Sand

---

Analysis	Blank Result	Detection Limit
	-----	-----
TRPH	u	25
Units	mg/kg	mg/kg

---

Date Extracted: 13 Apr 94              Date Analyzed: 19 Apr 94

TRPH = Total Recoverable Petroleum Hydrocarbons  
u = Below Detection Limits

Approved By: David E. Splichel      Date: 20 May 94  
cwB

C33

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

FAMIS Number: 2482  
Project Name: Fort Story Larc Area  
QC Identifier: Matrix/Matrix Duplicate

Date Sample Taken: 28 Mar 94      Customer Sample No: 532B32894  
Date Sample Recieved: 29 Mar 94      Lab Sample No: 940329-H015  
Sample Description: Soil      Extraction Method: SW-846 Method 9071  
Sample Container Used: 1-250 amber glass Analysis Method: EPA-418.1  
Comment: Grey Sand      Analyst: Charles W. Black

Analysis	Sample Results		RPD	Acceptable RPD	Detection Limit
	Run # 1	Run # 2			
TRPH	273	312	13	25	25
Units	mg/kg	mg/kg	%	%	mg/kg

Date Extracted: 13 Apr 94

Date Analyzed: 19 Apr 94

TRPH = Total Recoverable Petroleum Hydrocarbons  
RPD = Relative Percent Difference  
RPD =  $[(\text{Run 1} - \text{Run 2}) \times 100] / [(\text{Run 1} + \text{Run 2}) / 2]$   
u = Below Detection Limits  
NC = Not Calculable

Approved By:

*David E. Splival*

Date:

*20 May 94*

C34

QC Identifier: Matrix Spike/Matrix Spike Duplicate

Date:

David E. Spielhel

20 May 94



C35

DEPARTMENT OF THE ARMY  
Missouri River Division, Corps of Engineers  
Division Laboratory  
Omaha, Nebraska

FAMIS Number: 2482  
Project Name: Fort Story Larc Area  
QC Identifier: Blank Spike/Blank Spike Duplicate

Sample Description: Soil                      Extraction Method: SW-846 Method 9071  
Analysis Procedure: EPA-418.1              Analyst: Charles W. Black  
Comment: Clean Sand

Anal	Blank Res	Spike Added	Conc BS <sup>+</sup>	Rec BS	Blank Res	Spike Added	Conc BSD=	Rec BSD	RPD	QC Limi RPD %R
	-----	-----	-----	-----	-----	-----	-----	-----	---	-----
TRPH	u	1004	1249	124	u	1004	1245	124	0	25 75-125
Units	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	%	%	%

+ Date Extracted: 13 Apr 94              Date Analyzed: 19 Apr 94  
= Date Extracted: 13 Apr 94              Date Analyzed: 19 Apr 94

Extraction Solvent: Freon TF  
Final Extracted Volume: 100 mL

Anal = Analysis  
TRPH = Total Recoverable Petroleum Hydrocarbons  
Res = Result  
Rec = Recovery  
  
BS = Blank Spike  
BSD = Blank Spike Duplicate  
RPD = Relative Percent Difference  
RPD =  $[(BS - BSD) \times 100] / [(BS + BSD) / 2]$   
u = Below Detection Limit

Approved By:

*Dan E. Splach*  
cwB

Date:

*20 May 94*